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No. 20.

A Liquid Lice Destroyer.

How to Make It, and How to Use It.

There has been such a demand for copies of the October 1st, 1896, FARM-POULTRY, containing the article, "A Liquid Lice Destroyer," that the supply has been exhausted. It has been deemed advisable to rewrite the article for the benefit of our readers, and to incorporate in it some new matter which has been brought to notice through correspondence with those who have used and liked the preparation, as well as those who for some reason have failed to get good results. It is hardly worth while to repeat the story of how the lice destroyer was discovered, except to say that it was the result of many experiments, and the successful formula was brought to light when least expected.

There are many liquid lice killers on the market, and all that I have had samples of are good; i. e., they kill lice without apparent injury to the fowl. The complaint against them is that they are too costly. Any reader of FARM-POULTRY can easily make at home a liquid lice destroyer at a cost not exceeding thirty-five cents a gallon. I have some now on hand which cost me but nineteen cents a gallon, and made in quantity, it might be manufactured for a great deal less than that.

The liquid is made by dissolving in kerosene (coal oil) all it will take up of crude naphthalene flakes, (a saturate solution). Moth balls will not answer in place of the naphthalene flakes, as they do not dissolve so readily, and have in most instances been lying about, losing their strength. Most of the complaints of poor luck with the liquid have come from those on whom some druggist has foisted moth balls as the same, or just as good, as the flakes. The E. L. Patch Company, chemists, of Boston, Mass., now put up in 24-ounce packages, a preparation known as "Aromatic Naphthalene and Camphor," which retails for twenty-five cents per package. One package of this dissolved in two gallons of kerosene, will make the liquid lice killer.

This preparation, and one known as "Naphtha-Campho," (made by a firm in New York, whose name is not given on the package), I have used in preference to the crude flakes purchased in bulk, as the two mentioned preparations come in tight packages, and are more apt to be full strength. Some correspondents have made a great deal of difficulty out of the very simple manner of making the liquid. It is not necessary to be painfully exact in the making of it. If you do not find it convenient to make a quantity, simply take a quart bottle and fill it about one-third full of the flakes, then fill the bottle nearly full of kerosene, and shake until as much of the naphthalene has dissolved as will. If it all dissolves add more naphthalene. If it does not all dissolve, (and it probably will not), simply allow the surplus naphthalene to settle, and use the remaining clear liquid as a lice killer. Use the same care in handling the liquid that you would with plain kerosene, and you will have no trouble with it.

To rid a hen of lice by means of a liquid killer:—Paint the inside bottom of a box or barrel with the liquid, place the hen therein, and cover with a piece of burlap or a basket, something that will partially confine the fumes and at the same time allow the fowl a little pure air. If the weather is cold the box should be put in a warm place so the fumes of the liquid may be readily given off.

The fowl should remain thus cooped up for

at least half an hour, when she may be taken out and allowed to run in the open air. A number of fowls may be treated at one time. It is not dangerous for adult fowls to remain in the box several hours, provided they are not covered in too tightly. Caution should be used in treating chickens, as the youngsters are sometimes quite susceptible to the fumes.

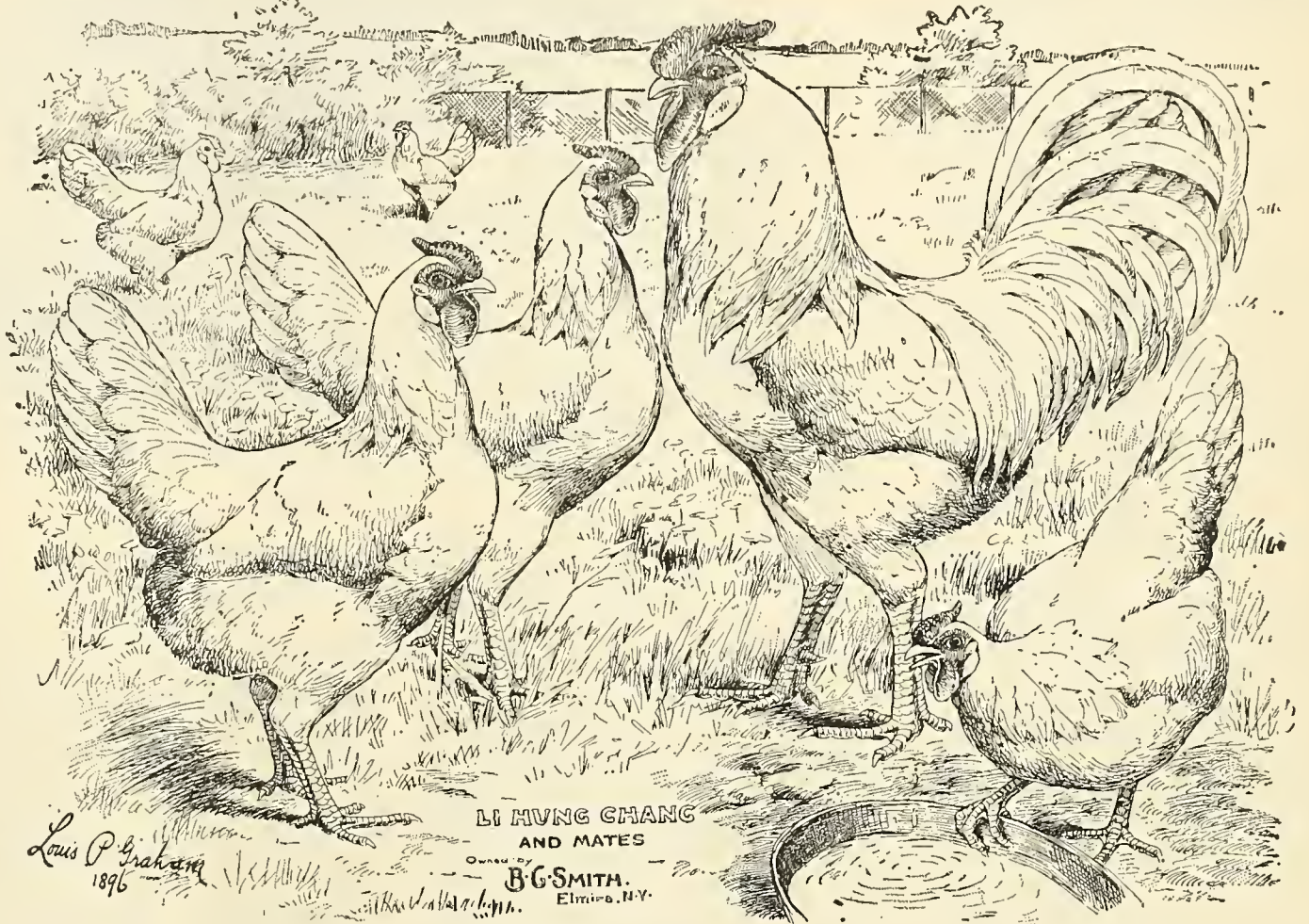
This preparation is not poisonous, and does not seem to affect the fowls other than to give them a slight looseness of the bowels, which wears off in twenty-four hours.

One application may not take all the lice off the fowl, but after two or three trials it will be hard to find a louse. It is also excellent to paint roosts and droppings boards to kill the mites.

Mites will not venture on roosts that receive a soaking in this liquid every two weeks. The odor of the naphthalin sticks to the roosts, and warns vermin away. After two or three applications the roosts will not need treatment oftener than once a month.

Sawdust slightly moistened with this liquid is an excellent article to keep vermin from the nests; or a little of the naphthalin and camphor flakes may be mixed with sawdust and placed in the nests. This will not affect the eggs if straw is placed between them and the mixture, and may be thus used in nest boxes for sitting hens without fear of preventing a hatch, provided that the eggs do not rest directly on the naphthalin and sawdust.

A lady in the west writes me that she has used the liquid with great success. She treated the fowls as previously described, and also touched with the solution every nit she found, with the result that her fowls have been practically free from lice, and the nits so treated



LI HUNG CHANG
AND MATES

Owned by
B. G. SMITH.
Elmira, N. Y.

ROSE COMB WHITE LEGHORNS.

First Prize Pen at Buffalo, N. Y., 1898. Bred and Owned by B. G. Smith, Elmira, N. Y.

failed to hatch. She also mixed the liquid with lard, and applied it to the heads and wings of chicks with satisfactory results.

It has been found to be of service in curing scaly leg, when mixed with lard and applied to the affected members. This is the best and cheapest lice killer I know of, and it will be found useful destroying all kinds of insects affecting poultry.

Moth balls may be used in the nests, but are no better than the naphthalin crystals, and I doubt if they are as good.

To free a sitting hen of lice she should be treated with the liquid a few days before giving her the eggs. The day the eggs are given her she should be thoroughly dusted with a good insect powder. Insect powder should also be worked into her feathers about the tenth and nineteenth days.

Care should be taken in the use of naphthalin crystals in the nests of sitting hens. A little of it well mixed with sawdust, and the eggs protected from it by a layer of straw, wood wool, or chaff, will not interfere with the hatch. A little goes a great way, and too much might spoil the hatch, although I have not thus far had any difficulty with it. Just enough to give the nest an odor of naphthalin is sufficient. I do not advise the use of kerosene or naphthalin in nests or nesting material except in extreme cases. For ordinary purposes the use of slaked lime or insect powder will prove sufficient. Too free use in the nest boxes of any article having a strong penetrating odor, will of course impart an undesirable flavor to the eggs, and is, therefore, not advisable. These directions followed, the little chicks when hatched should be free from lice, or practically so.

Here is what one of my correspondents has to say of the destroyer, and is but a sample of many letters which have been received: "Dr. P. T. Woods, Salem, Mass.—Dear Sir:—I am a reader of FARM-POULTRY, and read your recipe in October 1st number for a liquid lice destroyer. I tried it with good success, though not just as you directed. I have about sixty hens, and made about two quarts of the mixture. My roosts are about four inches wide, and flat. Every night before the hens went to roost I put as much of the liquid on the roosts as would stay and not run off. I followed this up for a week, or until the two quarts was all gone. My hens were very lousy before I used it, but now they appear all right. I have killed several, and found them perfectly free from lice, and saw no bad effects from using it. I have great faith in it, and am very thankful to F. P. and to you for it. It took me only five minutes a night to apply it. Yours respectfully,
Merrimac, Mass. N. J. S."

An unsolicited testimonial like the above is a strong endorsement of the efficacy of the lice killer.

Another correspondent writes that he uses the liquid freely about the poultry house, and also sprays some of it into the feathers of his fowls, using an atomizer for the purpose. He gets very satisfactory results, and has seen no harm from a free use of the liquid. His fowls are White Wyandottes, and the liquid discolors the plumage a little when first applied, but exposure to air and sun removes all traces of it.

Some complaints have been received from those who either have not made the preparation according to directions, or have used it

unwisely. One correspondent wrote that his fowls were nearly smothered by it, but investigation proved that he had placed his fowls in a deep box and covered them in so tightly that they could not get fresh air. His trouble was due to his own carelessness, as I distinctly stated in the directions that the fowl must be covered in in such a manner as to partially confine the fumes, and at the same time allow the fowl a supply of fresh air.

The chief trouble with a preparation of this sort is that it can be so easily used that the user becomes careless, and does not do the work thoroughly. It takes thorough work to get rid of lice that are closely hidden in the feathers of the fowls. One application of the liquid will not do the work thoroughly, and I do not believe that simply applying it to the roosts and droppings boards will get rid of all the lice, although some enthusiastic users of the preparation claim that it will. To thoroughly clean out the lice it is necessary to place the hen in something that will partially confine the fumes, and allow them to penetrate the feathers. The use of a volatile liquid of this sort on the roosts and droppings boards in a large poultry house would undoubtedly act as a disinfectant, and kill the lice and mites that might be on or about the roosts and boards, but it could not be expected to kill all the lice on the fowls, although it would get rid of some of them.

When you are unfortunate enough to have a lousy hen that is running with chickens, a simple way to rid both hen and chicks of lice is to dip a sponge or cloth in the liquid, wring it out as dry as possible, and then smooth down the feathers of the hen with it. Care must be taken to wring out the cloth or sponge as dry as possible. This operation, repeated several times at intervals of four or five days, will down the lice.

I am still using the liquid freely, and like it as well as ever; but I do not always find it convenient to handle an oily, strong smelling liquid, as it necessitates being dressed for the purpose, and the use of a dusting powder only requires an apron which can be put on or off in an instant. A good insect powder and a good liquid lice killer are both necessities. In some cases where the liquid cannot be used, the powder is available, and vice versa.

A number of excellent insect powders are advertised in this paper, but for those who find it difficult to obtain such powders, and desire to make a cheap and effective powder at home, I give the following recipes:

To a peck of freshly air-slaked lime add a half-ounce of ninety per cent carbolic acid, and stir thoroughly. To a quantity of this carbolized lime add an equal quantity (by bulk) of tobacco dust, and thoroughly mix. To this may be added a quarter part of powdered sulphur, if desired; the sulphur is not absolutely necessary.

Or, take half a peck of finely sifted coal ashes, and add about four ounces of the liquid lice killer, mix and dry, and add half a peck of tobacco dust.

Tobacco dust costs five cents a pound or less, and may be used alone as a dusting powder. I have proved to my own satisfaction that tobacco dust has another action in killing lice besides a mechanical one. Lice eating portions of feathers to which this dust clings, die, even when there is not a sufficient amount of dust present to clog their breathing apparatus.

To be effective all powders must be applied thoroughly. You must rub the dust well down into the feathers, or the lice will go scot free. It is also necessary to dust the fowls frequently in order to get any that may escape the first application, or which may have hatched in the interim.

Never be too certain that your fowls are free from lice; it is very easy to be mistaken, and when you feel quite sure that the lice are not there they are pretty certain to catch you napping. FARM-POULTRY did not stretch the truth to such an alarming extent when it jokingly said that "one thousand chickens out of every nine hundred and ninety-nine are lousy." As one of our correspondents puts it, "it was within one of being right."

Let your motto be not,—"When in doubt, look for lice," but,—*When in doubt, fight the lice.*

DR. WOODS.



BLACK MINORCA COCK, "ADIRONDACK CHIEF."

Bred and Owned by J. H. Doane, Gouverneur, N. Y.

The Broiler Plant of the Future.

By C. H. PAYNE, C. E.

It will be generally conceded that the first element of success in a broiler plant is healthy stock. Not only must the chick be strong when hatched—if it is to grow up strong, it must be the offspring of physically strong parents. I am satisfied that this end can best be secured by the scratching shed house for the breeding stock during the winter months, combined with the colony plan during the summer. When the eggs come from sound stock, properly mated, that were well cared for, and hygienic conditions prevail during the incubation and the entire period of the chicks' growth, vermin will be a minus quantity, and the result will be a maximum percentage of eggs hatched, a minimum percentage of mortality in the chicks, and a rapid growth.

Another element of success in a broiler plant, as in everything else, is economy. Economy of labor, economy of capital, economy of food, and economy of by-products, such as manure. A careful study of my scheme will show that I embrace these essential elements to an extent never before thought of.

The plan is for a ten acre lot divided up for a ten thousand broiler plant, including a stock of one hundred and fifty laying hens. There are four enclosures, each containing two and one-eighth acres, leaving a center lot of one and one-half acres for the buildings and yards.

The four enclosures are to produce crops in rotation, as follows: the first year, grain, with clover sown in the drills; followed the second year by clover hay; and the following two years pasture. Around the fences, which will be of wire netting six feet high, will be fruit trees, for shade as well as profit.

As soon as the weather permits in spring I select my breeding stock from the brooder, taking the finest March hatched pullets, and put them out on one of the pasture enclosures. I house them in batches of fifty, in portable bottomless houses, having half the front of open wire netting. The houses are distributed well over the lot, and are daily moved, by one man, one end at a time, on to clean fresh grass, leaving the excrement behind. The chicks are fed three meals a day of grain, and are kept out until about ready to lay in the fall, when they are taken into the scratching shed houses for the winter, where they remain

until the following April, when they quit their permanent quarters and again camp out.

Note, these fowls are hardy, as they were reared in the open air, and have been exposed in the open air scratching sheds every day during the winter. They are also prepared some time beforehand for camping out, by having the door left open at night between the roosting pen and the scratching shed.

The one hundred and fifty hens are put into three portable houses. Each house has a partition down the center, and the fronts are of wire netting. The perches are regulated in each compartment to hold twenty-five fowls, so that when one side is filled the rest of the fowls must go to the other side, and so prevent crowding. Outside of the wire fronts are shutters, hinged at the top, that when down entirely close up the house, but which can be fixed at any desired angle. For general summer use the shutter will be in the form of a canopy roof, in which position it is a shelter from rain at night, also both shelter and shade during the daytime. These houses have no bottoms; they have a pair of wheels at one end—fitted on an invention of my own, by which the house can rest on the ground, or by a slight jerk of a lever can be lifted up to travel on the wheels. At the other end are handles by which a man can push the house along as he would a handcart. Each house will be placed as far as practicable apart from the others, and moved daily just the length of itself, on to clean fresh ground, leaving the excrement behind. In course of time the entire surface of the field will have been manured, and uniformly spread by the fowls themselves.

This method is not only economic, it possesses the great advantage of giving the fowls what is practically a free range. With the protection of the wire fences on all sides there is no necessity to shut them up at night. "The early bird catches the worm." The fowls will enjoy perfect health, foraging for earth worms and insects, feeding on clean fresh clover, and breathing pure air, with only a light ration of grain twice a day. As soon as the field of grain is cleared the houses are moved with the fowls on to the stubble, where they will need no grain.

Assuming that these fowls were the proper breed and strain to start with, it will be certain that this stock will be the proper material out of which to make profitable broilers.

The advantages of this dual system are manifold. Not only have we the hardiest and healthiest stock it is possible to produce; we have also economized labor and feed, have prepared our land for the production of a double crop, and what is of great importance, have, by vacating our permanent quarters, "prevented" the existence of vermin. Of course, during the vacation the floor is cleaned out and everything linewashed, and prepared sweet and clean for the reception of the pullets in fall. The grass in the yards also has been saved from fouling by the rest, but has not been permitted to run to waste. In these grass yards, as in the runs of the brooder, as well as the pasture fields, will be kept two cows and as many sheep as will graze the pasture down to a suitable height for the poultry.

The grain crop, which in such rotation and on such richly manured land will be double the usual yield, will go far towards feeding the laying hens. Sufficient green clover will be cured, just at its best, and stored for winter use. The straw will be stored to furnish scratching litter for the brooder and the winter hen house. The cows' milk will be used in the chicken feed, and thereby promote growth. Sufficient meat for winter consumption of the laying hens and the chickens will be furnished by the mutton, unless this can be marketed and other meat feed substituted at a profit. There will be a considerable surplus of mutton and also of clover hay, as well as the fruit. These items I consider will amply pay for the cost of the farm work, which could be done on shares by a farmer. Hence, all the supplies we make use of are the returned value to us of the manure.

Having prepared for a supply of eggs, the next thing is to hatch them. Here again, we need to study hygienic laws. The incubator is of the proper humidity when partly in the ground; that is, if the ground is of a sandy or otherwise dry nature. It should also have no windows exposed to direct sunshine, as sudden fluctuations of the temperature will be caused in the room, which will interfere with the perfect running of the machines. The matter of most importance, however, is "pure air." My incubator room is located directly under the first end of the brooder pens. It is four feet in the ground, and three feet out. As the brooder shed extends six feet wider than the outside wall of the incubator room, there will be no sudden fluctuation of temperature. It will, however, be amply lighted by a large window in the partition near the main entrance to the building, which light will be borrowed from the large glass doors.

The method of ventilation is on the natural laws of gravitation. The air in the outlet flue, coming in contact with the warm smoke-stack of the furnace, is thereby rendered of less specific gravity than the outside atmosphere, and escapes as smoke does from a chimney, thus setting up a velocity of about one mile an hour, sufficient to empty the incubator room once every hour regularly, day and night, which is replaced by pure air drawn from the brooder shed.

Now comes the nursery period, that critical time when the death rate registers the imperfections of the system. The pipe system of brooding has been spoken of by some eminent authorities as a death trap, yet I know by long experience that it is not because pipes are used that so many young lives are sacrificed; it is because the system, as usually adopted, does not give the chicks the first essential of life,—pure air. Usually the heating system is inadequate to the work. The pipes are run much too hot, and the abominable system of hovers, (long ago abandoned in England), serve the chicks with burnt air that contains little or no oxygen. The heads of the poor little things are roasted, while cold drafts chill their feet.

In zero weather sufficient fresh air will work its way in without any special openings being provided. This must be properly directed and utilized. In my plan there are running sash on the outside wall of the pens. The crevices around the sash will supply fresh air in cold weather, the sash being opened as required at other times. I therefore run four pipes along this wall through half of the pens, two at bottom of the sash and two at top. The rest of the pens have



BUFF PLYMOUTH ROCKS.

Bred and Owned by Wm. C. Denny, Rochester, N. Y.

two pipes along this wall at top of the sash. This warms the air as it enters, and makes the coolest part of the pen comfortably warm. In addition to this there are four pipes, placed in the usual position, but without hovers, for the first portion of the pens; then two pipes for a further portion. These are varied again in size and height so as to give the proper degree of temperature in each pen. A thermometer placed two inches above the floor in pen No. 1, will register 90°; pen No. 2, 89°, and so on, falling one degree every pen, bringing the last one down to 70°.

The system of ventilation, it will be observed, is the same for each pen as described for the incubator room. The height, however, in the pens is reduced to a minimum; therefore with the same velocity in the exhaust flue, the air of the pen is changed every thirty minutes. The nominal power of the heater will be more than adequate to maintain the above temperatures in zero weather, and the automatic regulating damper will control the temperature during the coldest night, sufficiently accurate for practical purposes. Note, on a system that is inadequate, the regulating damper is a farce.

Most brooder houses are wasteful of heat. There is no sense in trying to heat the whole of a spacious lofty building for little chicks. The heat rises to the roof, and much of it escapes, while much more becomes chilled by contact with cold surfaces — (especially in zero weather), just when the heat is wanted most. My plan, while giving headway for a six foot man in the center, is entailed by the slope of the roof on the outside, and by the slant of the match boarded shutter on the inside. These shutters are no inconvenience, as they are hinged at the top, and being fitted with pulleys, weights and cords, are instantly lifted up into the roof quite clear of headway. They are furnished with a glass panel, through which the chickens may be viewed at any time. This is useful last thing at night, to take a peep and make sure there is no bunching.

Now it is obvious that pens enclosed as mine are can be better controlled and at much less cost, than a plan like the Loughlin. There, the thirty nursery pens are separated only by a low board, and are otherwise all open in one large room heated at 80°.

Again, in the Loughlin plan, chicks do not touch ground, or feel the sunshine, or get a breath of cool air, either winter or summer for thirty days. I believe, even in winter, excepting extremely cold weather, a blow of cool air is beneficial. For this purpose I have provided an open shed, having sand floor, and wire fronts, and waterproof sheeted

shutters that may be closed in bad weather. The partitions separating each shed are of close match boards, so that a sheltered nook is secured where the chicks can wallow in a dust bath. These sheds are also of inestimable value on rainy days.

In the Loughlin plan batches of from two hundred and fifty to three hundred chicks are brooded in a pen. I know by experience that not only is the mortality reduced by running smaller batches, but the growth is increased. As there is nothing to be gained by the large batches, I will run mine about one hundred to the pen.

Instead of the imperfect Loughlin plan of running with uniform sized pens for thirty days, then taking a jump, and again running uniform size for sixty days, I have a system of perfect progression. My chicks are moved from pen to pen every fourth day. With each move the temperature drops one degree, and the size of the pen, also the shed and the grass run each increase in proportion to the growth of the chicks. In other words, we start one hundred chicks as they leave the incubator, in a pen containing twenty-five square feet, and gradually increase the size of the pens until the twenty-first is one hundred and sixty square feet. We start with an open shed of sixteen square feet, and finish with sixty square feet. We commence with a grass run, peculiarly located so as to get the full sunshine, but protected from all except south wind, of twenty square feet, and the runs rapidly increase in size until the last one contains two thousand square feet.

If my scheme went no further than this, it would be vastly ahead of all others. Knowing, however, how susceptible chickens, particularly very young ones, are to such diseases as gapes, diarrhoea, chicken cholera, etc., and having learned by experience the cause of such troubles, my motto is, "prevention is better than cure." I have therefore made such provision as will with ordinary care be certain to prevent these or any other such troubles affecting the chickens.

The use of a grass run is twofold — for exercise, and to supply green food, earth worms and insects. Even in my large runs the time would come when the grass would become dirty and unfit for food. Therefore just as soon as the freshness goes off I close up the entrances of all those runs, and open another set of gates, leading into a duplicate set of grass runs of equal size to the others. This method is, for all practical purposes, about as good as free range. I know by long experience that it is the plan to pay, and "continue" paying.

Now about the labor question. It will be seen that the buildings are "concentrated" to an extent impossible with any other plan. During the colony term a two minutes walk will reach the fowls in any part of the ground. The entire brooder house has a basement under it three feet in the ground, except the incubator room, which is one foot deeper, and three feet out. The earth from the excavation being graded around the building, forms a watershed away from the building, so that heavy rains rapidly run off, and give the grass a chance to dry up quickly. The basement is reached by a driveway graded down the three feet of excavation, so that every kind of supply can be hauled in and stored in large quantities in this spacious basement. A cooking boiler will be located near the heater, so everything will be at hand.

In the Loughlin plant no soft food is given, I presume, because the man has no time to do more than throw down grain. As, however, a diet partly of soft food is known to promote growth faster than all grain, I shall feed a mash for breakfast. Here comes another grand use for the shed. It can be used as a serving room, or as a breakfast room. For instance, in zero weather I would feed the younger chicks the first meal in the pen. The sheds are all closed up snug with the waterproof shutters; I pass along with a supply of mash, take down the trough that has been cleaned and hung up over the sash of each pen, serve out the ration, and pass it through the window, in the trough to the pen, for the larger chicks, and excepting zero weather, the small ones as well, are better fed in the cool atmosphere of the shed. In this case the trough is placed on the floor, and the food served all round in every shed; then I step up on to the gallery inside and open the slides by cords; out rush the chicks, and the slides are closed behind them. While they feed I rake the night's excrement off the sand, and look to the inside water fount; then the slide is opened for them to run in and out at their pleasure.

Should this be the day for changing pens, immediately a batch is let out to feed, the shutter is pushed up, and the canvas floor is removed with the soiled chaff and sand, and a duplicate canvas floor is fixed in place. The chaff for one part and sand for the other are dumped in and spread. This transformation is the work of about two minutes — when up goes the slide, and the chicks run in; but not the same chicks that went out.

The line of division between the pens does not continue straight across the shed, but has a jog in it at the main wall. In this jog is located one slide, and close alongside of it is another slide, both opening into the one shed, but in different pens. Thus, when I let the chicks out I open the slide in the right hand corner of the pen; when I let them in I open the slide in the left hand corner, and the batch of chicks have passed from one pen to another without knowing it. They simply realize that they are in clean quarters. At night that left hand slide is closed, and in the morning the right hand one opened, the chicks are then one number ahead in the shed and grass run. No herding, driving or handling — the chicks are simply tricked into walking from one pen to the next without knowing it.

Canvas floors fixed on wood rails at each side, that are held in position by three cross rails, will, I think, be changed more rapidly than any other method. I do not think it necessary to boil and wash the canvas. I will have sufficient sand and chaff to absorb the excrement. In every change I will limewash the woodwork, and if the canvas is soiled in any part brush such part over with limewash. These will be prepared and placed in readiness before the chicks are fed, so that the slide need not be shut more than a few minutes.

When pen No. 21 is reached, and the fourth day arrived, those one hundred twelve weeks old chicks are ready for shipment. In the end of the pen at the inner corner, is a slide opening into the driveway. A hinged platform is furnished just suitable to hold a shipping coop in the position to receive the chicks through the slide of the pen. Inside the pen a ceiling of matched boards has been lowered to a distance of twelve inches from the floor. A twelve inch board reaching the full length of the pen is fitted with two rods, so that it can be drawn towards the slide, leaving a

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Why Shouldn't They

be large and vigorous, bred in open front scratching shed houses, from stock that went to laying at 5 months old? Reared in large orchards, with unlimited range. If cockerels raised that way don't please you, we are ready to take them back at our expense.

W. Wyandotte, B. P. Rock and Blk. Langshans from \$2 to \$5 each, ready for delivery after Sept. 1st.

PLEASANT VALLEY POULTRY FARM, Methuen, Mass.

Address BATTY BROS. Box 106, Lawrence, Mass.

narrow margin twelve inches wide only, of the pen. Another twelve inch board, twelve inches long is fitted at the end of this narrow space, and fitted in like manner so that it can be drawn toward the slide, when every chick is compelled to walk into the shipping coop. Five minutes will be ample for one man to coop the one hundred broilers in three or four coops, and pass them on to a tray which is placed alongside the hanging platform to receive them.

I shall use a specially contrived tray in the nursery of the incubators, into which the chicks will drop as they hatch out, and in which they will be carried and placed on the floor of pen No. 1, where the sides of the tray being hinged, are spread to enable the chicks to run off themselves. By this method and the contrivances before mentioned, it will be seen I do not have to once touch, herd or drive the chicks during the entire process of hatching and growing.

With water piped on to the pens and the runs it will be easy for one man to run this plant, (excepting the farm work), and have ample time to care for everything as it should be. Indeed, he will not have one-half the anxiety or work that the men must have in the Loughlin plant.

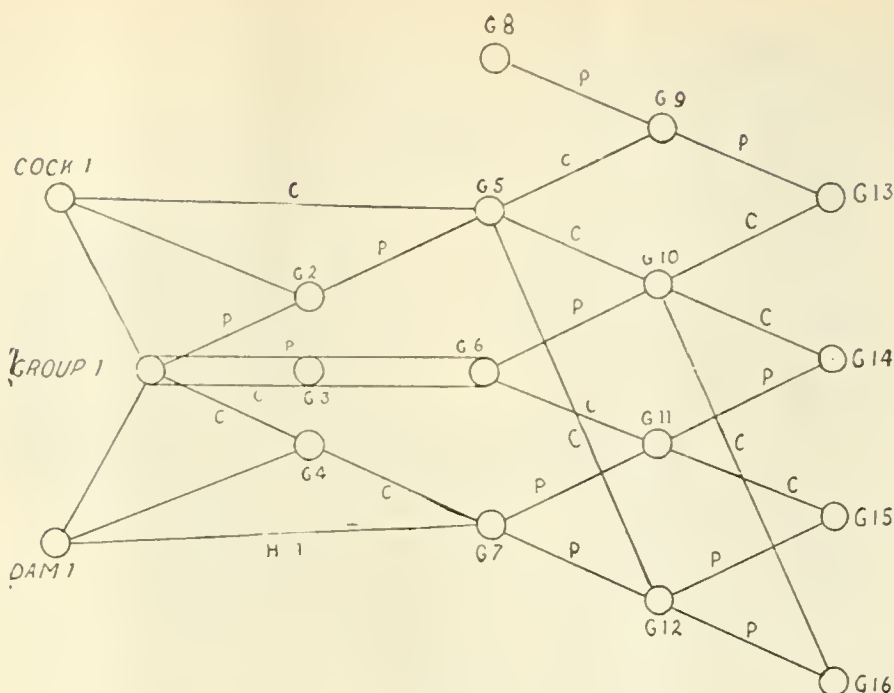
With regard to cost, I have carefully figured out the whole thing, based upon Boston prices for materials, and I am prepared, where similar prices prevail, and suitable land can be obtained, to build the entire plant, including the purchase of land, furnishing and stocking, (not farm stock), for \$2,500. I shall use three incubators of 360-egg capacity each, two brooder pens to a machine. Allowing the low estimate of one-half the eggs to mature, there will be ninety broilers marketed every four days; which, at thirty cents each, amounts to \$2,460 a year. In the Loughlin plant \$20 a day is stated to more than run the brooder (excepting eggs) that would work out at about three cents per broiler for labor and seven cents for food, etc. My labor includes the care of the laying hens, and will run to six cents, leaving seventeen cents per broiler profit, or a total of \$1,394 a year. I allow the hens to lay a surplus of eggs beyond what we use, which will pay for the rest of food that we do not grow. I am taking the full cost of the entire food as bought on the Loughlin plant, not deducting anything for what we grow. I also know that with this plan we can grow heavier chicks, and can mature a much larger percentage, all of which means more profit. I am going to be well on the safe side, however, and let all those items go, and also write off for contingencies \$394, leaving a clear \$1,000 a year profit.

By investing this \$1,000 a year in building other plants, one at a time, as fast as the profits accrue, it will take only about six years to complete a dozen such, and also include an up-to-date premises for the agricultural department, which would attend to the farming of the twelve poultry sections, at a splendid profit. If the profits work out fifty per cent higher than the estimate, as I believe they will, this mouster concern can be built in half the time.

The income at our low estimate will be \$12,000 or \$13,000 a year. I am pretty sure in my own mind that it will not be less than \$20,000, all from a first investment of \$2,500.

Sault Ste Marie, Mich.

The men who make money in poultry growing year in and year out, hold to the older and best known breeds. There are more Light Brahmas, Barred Plymouth Rocks, White Wyandottes, Pekin ducks, Toulouse geese and Bronze turkeys kept by the breeders of the business hen than of all other breeds known. This is so simply because these breeds have merit, and are known to meet the needs of the business man. One of the new, but not the newest, to come into favor is the White Wonder, but the circle it occupies is yet circumscribed, though its great laying powers are recognized. The danger in the hen business is that too much will be attempted before one knows how to proceed. Experience is the only teacher worth having, and books and papers the stimulus necessary to educate to a fair appreciation of the little details, not one of which can be neglected.—*Maine Farmer.*



MR. FELCH'S BREEDING CHART.

Breeding in Line.

The considerable talk about breeding in line has stimulated interest in line breeding, and we have not a few inquiries upon the subject, as, for example, a letter from a Pennsylvania reader, which asks, "Will you please tell me what is meant by the expression, 'bred in line?'"

Obviously, the term means breeding from closely related stock, stock of the same line of ancestry, as, for example, mating a cock with his daughter, or a cockerel with his mother, and so on. This is breeding strictly within the family line. Some breeders practice breeding from a male bird of high excellence as to shape, color, plumage, etc., to two females, each as nearly as possible typical in shape and color, and then working along those two lines of descent. Others would work from one sire and dam, mating within the lines of their offspring for three or four generations, then bringing in new blood by out-crossing upon an unrelated dam selected for typical excellencies, and as nearly as possible perfect in shape, color, etc.

The better to explain this idea, we copy a diagram of this mating from Felch's "Poultry Culture," and a study of the lines as there laid down will explain the idea of these matings better than anything we could say. "The first year a cock and dam are mated to produce group No. 1; the second year a pullet from group No. 1 to cockerel No. 1, a cockerel the exact type of his sire to hen No. 1, a cockerel like the sire to the pullet approaching the nearest to perfection, producing in their turn groups 2, 3 and 4, and the third year mating as indicated by the lines producing groups 5, 6 and 7,—in all the young stock using no males that are not as nearly as possible the exact type of the sire, nor pullets other than those most nearly like the dam, or as nearly as possible the desired type in form and plumage. In this way three families are produced very nearly alike in type, closely related, but somewhat different in blood, all made from the same cross; or, to be exact, all of the same line of breeding. Three or four generations of this breeding will place a breeder and his strain of blood on a firm footing, and if he uses none but females in the introduction of new blood, selecting a female as nearly as possible typical in shape, etc., he can continue this line of breeding indefinitely. This will necessitate disposing of a great many of the offspring to market, using nothing that is not at least fifty per cent of the blood of his strain. He will keep close to his type, and have stock that will please him and please his customers."

Of course, this is extreme inbreeding, and poultrymen should know that such inbreeding intensifies any weakness in the stock, and can only be justified by the desire to perpetuate certain valuable traits, as, for example, certain prominent fancy points. Not a few experienced breeders practice line breeding, assuming the risk of physical deterioration of the stock for the sake of advantages gained in fine points perpetuated. Whether the game is worth the candle, each man must decide for himself.

Fattening Chickens.

Poultry raisers who make a business of selling young chickens cannot do better than to study some of the methods which swine and cattle raisers adopt in preparing their animals for market. A fat chicken is always desirable, and a full plump body and limbs will go a long way toward finding a customer. Most of the chickens sent to market are lean and lanky. It is said that it is hard work to fatten a young chicken.

Is it so hard? I believe if the right methods are observed that it will be found an easy matter. A young chicken is prone to run around a good deal, and her nervous activity is apt to run off all fat. Three or four weeks before it is time to market the chickens confine them in narrow enclosures where they cannot run around much. Keep out all roosters or fighting chickens, for worry is sure to keep them thin. Only a few should be kept in each enclosure.

The pen should be a good one from every point of view. It should have a shady run and a sunny side, so that the chickens can suit themselves a little. Preferably it should have some green growing grass or shrubbery. This helps to make life more pleasant and agreeable to the chickens. Everything to make their quarters comfortable should be added.

Now give them clean fresh water once or twice a day, and all the fattening food they can eat. Muscle and bone making food are not required. These can be eliminated entirely. Corn in various forms should be fed freely to them. Cooked corn, mashed and ground corn, and whole corn should be fed every day. Warm potatoes and bread crumbs will also make fat. Any kind of milk and a little sugar will help along the fattening process. The process must be hurried along as fast as possible, for during these days the chickens will eat considerable, and if they do not lay on fat every day it will be a losing operation. In the end, however, good returns should be made for all this trouble and expense, for the chickens will sell more quickly in the market, weigh more, and generally bring the top prices.—*Michigan Farmer.*

Poultry.

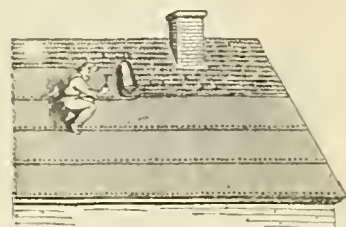
An absolutely non-poisonous disinfectant is a necessity in the poultry run and pigeon cote. Healthy birds can be produced only in healthful surroundings—"Sanitas."

How to have thoroughly sanitary surroundings is told in a pamphlet by Kingzett, the eminent English chemist. Price 10 cents. Every household should contain this little help to comfortable living. It will be sent FREE to subscribers of this paper. Write

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636 to 642 West 55th Street, New York City.
Disinfectant and Embrocation Manufacturers.

ROOFING The best Red Rope Roofing for 1c. per sq. ft., caps and nails included. Substitutes for Plaster. Samples free. The Fay Manilla Roofing Co., Camden, N. J.

Cover Old Shingles at Small Expense.



Have
A roof
Water
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Wind
Proof.

Easily Applied. Lasts years.
The roof will be as tight as a drum.

MEDAL BRAND WIRE EDGE ROOFING.

Put over your old shingles will save you money and give you a comfortable dry house.

Send for Free Illustrated Booklet,
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188 Devonshire St., Boston, Mass.

HALLOCK'S

PEKIN DUCKS

"Are among the first on the market, are sought for by the trade, command the highest prices, and give best of satisfaction in every way." And 'tis the same story in the show room—the proof is the long string of blue ribbons they've won at New York, Boston, Washington, D. C., and other shows. Breeders are now ready at money saving prices. A free booklet gives the particulars.

A. J. HALLOCK,

Box B. Speonk, L. I., N. Y.

\$1.95 BUYS A \$3.50 SUIT
3,000 CELEBRATED "KANTWEARLIT" double seat and double knee. Regular \$3.50 Boys' 2-Piece Knee-Pant Suits going at \$1.95.
A NEW SUIT FREE for any of these suits which don't give satisfactory wear.
Send No Money. Cut this Ad. out and send to us, state age of boy and say whether large or small for age, and we will send you the suit by express, C.O.D., subject to examination. You can examine it at your express office and if found perfectly satisfactory and equal to suits sold in your town for \$3.50, pay your express agent our special offer price, \$1.95 and express charges.
THESE KNEE-PANT SUITS are for boys from 4 to 15 years of age, and are retailed everywhere at \$3.50. Made with double seat and knees, latest 1909 style as illustrated, made from a special wear-resisting, heavy-weight, ALL-WOOL Oakwell casimere, neat, handsome pattern, fine serge lining, Clayton patent interlining, padding, staying and reinforcing, silk and linen sewing, fine tailor-made throughout, a suit any boy or parent would be proud of. **FOR FREE CLOTH SAMPLES** of Boys' Clothing (suits, overcoats or ulsters), for boys 4 to 19 YEARS, write for Sample Book No. 900, contains fashion plates, tape measure and full instructions how to order.
Men's Suits and Overcoats made to order from \$5.00 up. Samples sent free on application. Address,
SEARS, ROEBUCK & CO. (Inc.), Chicago, Ill.
(Sears, Roebuck & Co. are thoroughly reliable.—Editor.)

ORR'S CLEAR GRIT.

Standard for quality. 100 lbs. 75 cts.

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POULTRY SUPPLIES
We carry in stock everything which goes to improve the condition of the poultry yard and make poultry more profitable.
All kinds of prepared foods, grit, insecticides, &c.
A complete line of appliances, bone cutters, incubators, clover cutters, drinking fountains, &c.
Cut Clover Hay.
Best second crop clover, ready to feed, \$1.75 per 100 lb. sack.
Write for what you want—we have it. Free illustrated catalogue upon request.
HARVEY SEED CO.,
19 Ellicott Street, BUFFALO, N. Y.

CLEANED AND FILLED in a Minute.
The latest, cheapest and best. See the name. Just what you want. Any poultry supply dealer—or direct from
ATSATT BROS.,
Mattapoisett, Mass.
Send for Circulars.

DECKER'S NOVELTY LEG BANDS,
for poultry and pigeons. Permanent success; five years in use; a beautiful band for the show room; whitening and a damp cloth will make them shine like burnished silver; large space for marking. Bridgeport, Conn.—It is the only band I have had that is sure to stay on.
WILLIAM E. HOWES. When ordering mention breed. Price, 25 cts. per doz.; 40 cts. for two doz.; \$1.25 per 100. Send for circular.
W. J. DECKER & CO., Cresskill, N. J.

Is the Duck Business Overdone?

Duck raisers are in a good deal of a quandary at the present time. The period of good prices has been apparently shortened each year, until this season the bottom dropped out of the market, so to speak, almost at the outset, and there were times in June and July when it was almost impossible to sell ducks at any price, and prices ruled so low that not a few large duck raisers curtailed their operations, shut down on the hatching, and produced twenty, twenty-five or thirty-three per cent fewer ducks than they otherwise would have done. We have interviewed a number of duck raisers and market men to get their views of the duck situation, and, generally speaking, we think the answer to the question at the head of this article is in the negative. One or two duck raisers say there has been overproduction this year, or, more correctly speaking, underconsumption; that is, owing to purely local causes, there have been fewer ducks sold to hotels, etc., at summer resorts, notably at the seaside hotels. It is generally accepted that the war scare of the spring and early summer months cut off the attendance at the seaside resorts, and that a part of the lessened consumption of ducks is due thereto. We had a chat with a duck raiser recently who sells his product direct to half a dozen large seaside hotels. He has had a steady and fairly profitable trade all the season, getting fifteen cents a pound for most of his ducks at a time when many shippers were receiving but ten or twelve cents, and as nine-tenths of his product were sold at fifteen cents, it is obvious that he secured a fair profit on his sales, because his prices were net,—no commission was deducted. A less favorably situated breeder who shipped his product to a New York commission dealer, received but ten cents a pound for a time, with freight and commission out of that, and told us that he barely got back a new dollar for an old one, if he considered interest on plant and cost of hatching and raising the ducklings.

We have talked with several market men about the duck situation, and while all agree that the present has been an unsatisfactory year, they likewise agree in saying that this is due to the peculiar conditions of the year, and that better times, which everyone believes are in sight for next year, will show a decided increase in demand, and probably a falling off in production. The falling off in production will probably be found in the west. As one market man explained it, the western raisers have shipped in rafts of stuff here which has brought only five or six cents a pound, and of course has been produced at a loss:—naturally they will raise fewer ducks next year. Another market man explained the unusual drop (or "toboggan slide," as he expressed it), in prices this season by the immense quantity of western ducks which were held in cold storage, and thrown upon the market as soon as the season opened; being a poor quality of ducks, they had to be sold at low prices, and overwhelmed the market like a flood.

A New York correspondent writes under date of Sept. 21, as follows:—

"Could not a very interesting and to many a very instructive article be written upon the present state of the duck market, as to whether there is or has been overproduction, and as to whether it would be advisable in present conditions to start another duck farm?"

"If we could also have a review of the market during the past year and a comparison of this year's market with those of say the last five years, it would greatly help at least one subscriber to decide on the course he is to pursue."

In *A Few Hens* for September 15, several duck men gave their opinions upon the low price of ducks this year, in answer to the question,—"Do you think the low price in market for early ducks indicates a glut?" We give two of the answers to that question, which practically bear out what we have said above:

"No; it is in consequence of the immense quantity of cold storage ducks on hand. Our first box of spring ducks, shipped March 1st, brought in 37c.; the next, 30c.; after which the price soon went down to 25c. As long as cold storage ducks were selling at 11c. and 12c., it naturally kept the price of spring ducks down."

JAMES RANKIN.

South Easton, Mass."

"It indicates a glut at this particular time. It is not a permanent condition. The very poor business of the summer hotels and resorts, (from whatever cause) has shut off the usual outlet for the duck crop, and as a consequence, while the crop is not an unusually large one, all sections considered, there is a general underconsumption, which is naturally shown in a stagnant market and low prices. We anticipate next year's trade will be proportionately larger."

GEO. H. POLLARD.

So. Attleboro, Mass."

Our correspondent asks if there is or has been overproduction. There apparently has been overproduction this year. We very much doubt if the same conditions apply next year, because, as we said before, we doubt if there is so large a production in the west, and consequently so heavy a glut in the markets; and as there will probably be an increase in consumption, we look for prices to be better sustained. In the long run we do not believe in overproduction; that is, there is a steady increase in consumption, taking a series of years into account. Duck raising is simply the manufacture of an article of food, and while the break in prices of the season just past indicates overproduction in this season, we believe that the same conditions are not likely to obtain next season, and probably not again for years, hence we look hopefully forward to a good business for the duck men next year.

A shrewd business man would tell our New York friend that the very best time to embark in the business is during a period of depression. Owing to the market conditions this year breeding ducks can probably be bought at a comparatively low price, and a duck farm could be started better at the present time than at any time in the last half dozen years, with a good prospect of a profitable business in the future.

Poultry and the Farmer.

The hen is the best help on the farm, and yet few farmers seem to realize that fact. The old rule was to keep a lot of hens, all sizes, ages and conditions, running together. The nests were here, there and everywhere, and it took an hour to thoroughly scour about for the eggs, which seldom amounted to more than a dozen. The eggs, scarce as they were, were taken to the country store, and traded off for goods. The eggs were bought by the merchant at the wholesale quotation, and the goods given in pay were charged at the "country store retail price." It was a one sided game, and no wonder the "pesky hen never paid."

But when the farmer has given the poultry culture thought and study, and has built comfortable houses and big runs, and divided up his flock into small families, he has had a revelation. The hens not only soon proved that they were profitable, but demonstrated the fact that when given a chance they were veritable "mortgage lifters." More than one enterprising farmer has had a burden taken off his shoulders by the aid of a harem of well kept hens. Many a farmer used to be, and many still are sorely pressed during the winter for money to buy groceries and such things as they are unable to raise on the farm, as they really have nothing to sell. It was either a question of going into debt or going without it. It will not be many years before every well regulated farm will have a substantial henry attached to it.—*The Poultry Farmer*.

MARKET REVIEW.

Eggs.—Eggs are firmer on a moderate supply, and choice fresh Michigan and Indiana eggs sell readily at 17@18c; other marks of western are quoted at 15½@16½c. Refrigerator eggs are in good demand at 14½@15½c. Eastern fresh are very firm at 19@20c, with nearby and fancy, 21@23; jobbing prices 1@2c higher. The cold storage stock is now 94,210 cases, against 69,999 cases at the same time last year.

Poultry.—Poultry is steady on a light supply. A few young iceed turkeys are coming in, and are quoted at 17@18c, while old turkeys will not sell at over 12c. Fresh chickens are firm at 15@17c; iceed, 11@14c; fresh fowls, 12@15c; iceed, 11@12½c. Green ducks, 10½@11c.

In September, the important question of the month is, how to feed the laying flocks so as to induce them to put in their time to best advantage between now and winter. With the exception of a few specimens intended for breeding or exhibition, which may be allowed to moult normally, the average hen may best be coddled in the endeavor, to force egg production during the season of raising prices, the moulting being deferred until after Thanksgiving. It has been my good fortune to accomplish this, with varying degrees of success, but largely in proportion to the pains taken with their diet. As the egg yield begins to diminish in midsummer, then is the time to add both to the nutritious element and the stimulating by an increased proportion of meat and condiments. If I have been rather chary of meat during the breeding season, I both increase the same, and add cayenne pepper to the morning rations of scalded feed. During several seasons, when I mixed salt with the feed, about as would suit the human palate, I found no difficulty in maintaining a good egg yield until cold weather. Last season I omitted salt, and my fowl took to moulting all through the early and late autumn. I am impressed with the value of salt as a means of prolonging the life of the feather, and shall add it to the rations this season accordingly. My feed for laying fowl is wheat entirely in summer for second meal of the day. I believe that cool quarters and seclusion from inclement heat in summer are as essential as protection from cold in winter for best results.—F. W. PROCTOR, in *Poultry Monthly*.

DAVIS'

Blue Barred Plym. Rocks.

At the New England Fair, Portland, Me., Aug. 22—26, 1898, my birds were awarded all the 1st and all the 2d prizes, making an entire sweep of the Plymouth Rock class.

At the West Newbury Fair, Sept. 13 and 14, 1898, (Atherton, judge) I won 1st and 2d pair of chicks; 1st and 2d pair of fowls; 1st breeding pen of chicks. Winning EVERY PRIZE competed for in the Barred Rock class.

At the Amesbury and Salisbury Fair, Sept. 26—28, 1898, H. B. May, judge, I won all the 1st and all the 2d PRIZES, making a CLEAN SWEEP of the Plymouth Rock class.

200 GRAND BREEDING COCKERELS. 100 CHOICE PULETS FOR SALE.

All hatched and raised by hens on free grass range, plenty of shade and running water, thus insuring strong and vigorous birds. Any stock sold that is not satisfactory in every respect may be returned at my expense, and money will be cheerfully refunded. Write for prices and circular.

W. B. DAVIS,

Care Merrimack Nat. Bank, Haverhill, Mass.

Beats the Loughlin Plant.

It no longer needs a millionaire to build a 100,000 a year broiler plant. The advertiser, after years of study and experience, in Europe and America, has perfected a plan for a Poultry and Broiler plant that is acknowledged by experts to beat the world.

It Will Not Deteriorate.

The plan is the most practical, the stock is kept under conditions the most healthful, the financing of the scheme is the most profitable of any thing yet attempted in poultrydom.

\$2,500 Capital

will start a 10,000 broiler plant. The profit of that one (after allowing wages for running it) will quickly pay for a second. Those two will pay for a third, and so on, till in six years the capacity will be 120,000 broilers, at a clear

Profit of \$12,000 a Year.

The advertiser is prepared to furnish plans and specifications, and superintend the building and starting of the plant for any person at a moderate charge.

Partner Wanted

to join with advertiser in building and running a plant. A suitable person, not necessarily a poultryman, possessing land and \$1,000 cash. References given, and required. Write full particulars to—

C. H. PAYNE,

POULTRY ARCHITECT,

Sault Ste. Marie, Mich.



Climax Leg Bands STAY ON.

Are neat, light and durable, and no tools are required.

Prices Postpaid.

Per doz. . . . 25c.; per 25 . . . 40c.

Per 50 . . . 75c.; per 100 . . . \$1.35

Give size wanted. Samples free.

All supply dealers sell them.

KEYES & DAVIS,

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Pat. Applied for.

A WINTER EGG PRODUCER

Warm quarters make hens lay, and nothing will make as warm poultry houses as

Cabot's Insulating



This wonderful insulator is constructed upon scientific principles, is ten times as warm as resin paper, and costs only about 1c. a foot. Send for a sample.

Samuel Cabot, 7 Batterymarch St., Boston, Mass.

MAMMOTH PEKIN DUCKS.

March and April hatched, \$1 each and upwards. Prices advance soon. Bargains in

WHITE WYANDOTTE COCKERELS.

J. F. STOCKING & CO., Montvale, N. J.

SEND US ONE DOLLAR

and this ad. and we will send you this big 325-lb. new 1899 pattern high grade RESERVOIR COAL AND WOOD COOK STOVE, by freight C.O.D., subject to examination.



Examine it at your freight depot and if found perfectly satisfactory and the greatest stove bargain you ever saw or heard of, pay the freight agent our SPECIAL PRICE.

\$13.00 less the \$1.00 sent with order, or \$12.00 and freight charges. This stove is size No. 8, oven is 16½x18x11, top is 42x23; made from best pig iron, extra large flues, heavy covers, heavy linings and grates, large oven shelf, heavy tin-lined oven door, handsome nickel-plated ornamental decorations and trimmings, extra large deep genuine Standish porcelain lined reservoir, handsome large ornamental base. Best coal burner made, and we furnish FREE an extra wood grate, making it a perfect wood burner. WE ISSUE A BINDING GUARANTEE with every stove and guarantee safe delivery to your railroad station. Your local dealer would charge you \$25.00 for such a stove; the freight is only about \$1.00 for each 500 miles, so we save you at least \$10. Address, SEARS, ROEBUCK & CO. (Inc), CHICAGO. (Sears, Roebuck & Co. are thoroughly reliable—Editor.)

Mr. GEO. H. NORTHUP,

The well known Minorca breeder, writes: "Your ground meat is very best I have ever received." Others say the same. Price, 40 lbs. \$1; or \$2 per 100 lbs. A few hundred choice Pekin breeders at very low prices now. Circular free.

J. E. STEVENSON,

Columbus, N. J.

A CLEAN SWEEP.

At the recent New York State Fair, my Barred Plymouth Rocks won 1st cock, 1st cockerel, 1st pullet and 1st pen, in competition with birds from four states. At Watertown, N. Y., the next week they won every prize offered.

400 grand young birds for sale at reasonable prices. Also White P. Rocks, Buff Leghorns, and Pekin Ducks.

M. S. GARDNER,

Jefferson Co.

Philadelphia, N. Y.

Money Made and Saved



with a \$5 PRINTING PRESS. Print your own cards, etc. Big profits printing for neighbors. \$16 press for circulars or small newspapers. Type setting easy, printed rules. Fun for spare hours, old or young. Very instructive. Send stamp for samples & catalog presses, type, paper, etc., to factory.

KELSEY & CO.,

Meriden, Conn.

W. Wyandotte and S. C. W. Leghorn Cockerels and Pulets, for sale.

Choice vigorous birds, had free range. Cockerels, \$1.50 to \$5; Pulets, \$1 to \$3 each. Write your wants. My aim is to please. Orders filled after October 15th.

R. H. HOLMES,

West Redding, Conn.

BLACK MINORCAS.

At Madison Square Garden, N. Y., 1888, "Adirondack Chief," a bird of my own breeding, won First, also Third on cockerel, and Fourth on pullet. Good young hens, mated to cockerels bred from my best prize matings, at \$6 to \$10 a trio, mated for breeding. My Minorcas are bred for business. New circular gives list of prizes. Mention F-P.

J. H. DOANE, Box 514, Gouverneur, N. Y.

THE CROWN Bone Cutter

For the poultryman. Best in the world. Lowest in price. Send for circular and testimonials. Wilson Bros., EASTON, PA.

FARM-POULTRY PRACTICAL EXPERIMENT CLUB.

In this department all published matter pertaining to the Experiment Club and its work will appear. We want every member to feel perfectly free to ask questions and make suggestions. Discussions of topics suggested to members by their own record sheets are especially desired.

Does Poultry Keeping Pay?

Mr. Editor:—Among the great mass of writing on the profitability of the poultry business, the question of cost of caring for poultry is generally ignored, or else lightly dismissed with the remark that it takes only a few minutes, or that it is not much work to do it.

From my own practice, I am pretty well convinced that there are very few poultry keepers who get even the commonest of wages for the time spent in caring for their poultry. I speak, of course, of those who produce market poultry and eggs—"utility men." What the fancy poultry men get over their advertising bills, is a matter for them to state if they choose. Cannot your Experiment Club determine this point with a tolerable degree of exactness? Suppose that each one keeps an account for one week of each month, of the minutes he spends in feeding, watering, gathering eggs, examining his flock for lice or symptoms of disease, cleaning houses, keeping up fences and buildings, hunting for stray fowls or chickens, and any other work that has to be done for the sake of profit or the prevention of loss. A sheet of paper and a lead pencil hung up in the poultry house or the grain room, if there is one on the premises, and a minute each day to make the entries, will do the business, and a record for one week fairly kept, may be taken as showing the average time per day for the month.

I believe that such a record will astonish the man who keeps it, and go far to show that poultry generally does not pay what would be considered decent wages in any other pursuit. I think it will also be found that the man who spends the least time on his poultry, gets no better pay than the man who does everything as it ought to be done, for his receipts will be pretty well proportioned to the care given.

I have not yet kept such a record, but I have watched my own operations pretty closely, and am not at all satisfied with results. When my year begins I shall take account of stock as usual, keep account of all purchases of stock and supplies of all kinds, including feed; credit all eggs laid at market price here, credit all poultry sold at actual prices received, charge poultry account with all eggs used for hatching, at the prices they would fetch if sold in market; and also charge up all glass and putty used in mending windows, all lumber and nails used in repairs or temporary quarters erected, taking into account the value of such lumber for future use. Whatever of cash value the books show at the end of the year, is my pay for work and worry in running the plant. I do not think I would be willing to do the same amount of work for a neighbor for the profits that I have made in any year up to this date.

It seems to me desirable that some data should be had on which to base calculations as to the rewards to be expected from poultry keeping, and a systematic account of the cost of labor, feed and incidentals kept by such a body of poultrymen as your Experiment Club, for one year, will go far toward settling the question. One or two isolated accounts are of no value whatever, for circumstances and conditions vary so greatly with different individuals that a system of conducting operations well suited to one man might be a failure with another. We want to get at the average probabilities of profit in the business.

There is a great deal of writing and lecturing done in regard to the profits of poultry keeping that seems to be done with a design of inducing as many people as possible to enter the business, and it may be that some of the writers and lecturers on the subject are interested in making markets for "thoroughbreds" and "prize winners," with little regard for the interests of possible buyers. It is a great wrong to induce a poor man or woman to embark in a doubtful venture by holding out

bright hopes of great and sure profits. It is also an injury to those who have embarked in the business, in that it keeps the markets full of poultry and eggs sold at any price offered, simply because the producers have not learned how to prepare eggs or poultry for sale in such condition as to bring fair prices. It is easy to say that good fresh eggs always bring good prices, but it is a cold fact that seven buyers out of eight will, in an open market, take their chances on the lowest priced eggs in sight. I have watched them here, buying from farmers' wagons which come into the city on Saturdays by hundreds, and they all search for the man with lowest prices, and then scold at the dishonesty of farmers who sell stale eggs for fresh.

So far, I do not believe that any man can care for enough poultry to make his living on the profits at such prices as the average poultry keeper must be content with; and if I can say or write anything to cause people to consider and investigate before getting in too deeply to get out without loss, I shall think my effort well spent. I have kept poultry in a small way for very many years, and am ready to enlarge my plant to any size as soon as I see a way to make it worth while. I have learned from experience a great many things to do, and a great many things to avoid—and in many points my experience and the statements of poultry enthusiasts are at long odds.

Should you wish to hear from me again, please say so. H. A. J.

Dubuque, Iowa.

[Won't some of our members reply to this gentleman who takes such a pessimistic view of poultry keeping? We have written our opinion on this question several times, and would like to hear from our members this time. Later we will tackle the subject again.]

We are glad to hear from our Iowa friend, and there is much in his letter that is good. We should be pleased to have our members adopt his suggestion of keeping an account of time spent with their flocks. We think that they will find that poultry keeping pays, and pays well.—ED.]

An Experience With Mites.

During the last week of July I found my brood coops were swarming with mites. I had been cleaning them frequently, and saw no signs of vermin until they were in complete possession. The coops were not made to permit whitewashing, and I don't think lime would have exterminated them, anyhow. My experience with mites dates back to last August, when we tried lime and carbolic acid with no effect. At that time Mr. J. burned most of the coops, saving a few boards to use in a board walk. If I could have done as I wished, not one inch of old lumber would have remained in my yard.—being unable to cut it up myself, it staid there—to my grief this month. Well, I burned all my coops but two which were perfectly clean. Then I sprinkled one of the houses, which had been empty since cleaning time in June, with Dr. Woods' remedy, and carried every one of my one hundred and fifty chickens after dark from their yard to this house, shutting them in about an hour. Repeated the operation the next night. The morning after I found lying on a roost which had been saturated with the mixture, a feather, and on it were two live mites. I gave up in despair, and allowed the chickens to roost where they pleased. Most of them selected the fence and small trees in their yard, and for the next two weeks it rained nearly every night. Yesterday I examined the top rail of the fence, and found the enemy still present. In this yard is my coal house, a large, cool, dry building which I used as a hatching room this summer for the first time. On August 24,—about the time the last five hens were to hatch, I examined the boxes more carefully, and found them full of mites—so were the hens; one, in fact, was almost a case. Her eggs were from Leghorn hens, and were all chipped, yet another day of it would kill the hen. There were two W. P. Rocks broody, and with some coaxing they took the eggs from two hens, and hatched them that night. The other three hens were put in clean nests and allowed to hatch in the coal house. I dusted them with Persian insect powder, and saw no more mites on them. The boxes were saturated with coal oil, and burned outside

and inside, but not entirely consumed: I can still use them. The coal house is closed.

Mrs. J.

You certainly had an experience with mites, but there must be something wrong with the management to have them get so much the upper hand. Those coops ought to have been made to permit thorough cleansing and whitewashing.

We think that the reason you had ill-luck with Dr. Woods' lice killer was that you expected too much of it. When mites were as thick as you describe them, using it in the manner you did would hardly be very effective. Had you treated each bird separately, or two or three together in a box, as advised, you would have had better results. Used as you used it, and trying to treat one hundred and fifty birds that were loaded with mites at one time, we would not expect it to reach the vermin. The feather with mites on it which you found on the roost ought not to have discouraged you. It was probably dropped after the fumes had almost been exhausted in the air of the house. We have seen lice and mites crawl about on a board recently wet with the liquid, but they died later, and it did not cause us to lose faith, as we know the liquid will kill every mite or louse it comes in contact with, and it is much superior to plain kerosene.

Mites are hard to kill unless directly reached by the fresh fumes or the liquid. They die harder than do lice. When fowls were inhabited by such an army of mites we should prefer to dust them with a good powder, that we could be sure we had reached all that were on the fowl.

We think that a thorough whitewashing of all houses and coops, and drenching of all roosting places with the lice liquid, would be the best thing for you to do, even if you are quite satisfied that the mites are downed. We would clean up every place where those vermin inhabited hens have been, and whitewash every place that could be so treated, fence rails and all; and we would put the wash on hot—"slosh" it on with a broom or mop.

Then, too, we would not let our hens run as yours do with the neighbors' vermin infested fowls. It would pay you, if you intend to keep poultry for profit, to change your methods quite a bit, and have the neighbors' birds yarded out, and your own yarded in.

There is precious little profit in "slipshod" poultry keeping. It may pay a small profit, but it does not pay for the labor and worry. We do not want to hurt your feelings, but from what you tell us in the unpublished portion of your communication, your methods certainly come under the designation, "slipshod." We wonder that you have done as well as you have, and you certainly deserve credit for all that you have done; but do alter your methods, and get all the profit there is in the business. Fewer fowls, well yarded and housed, would pay you better profit, and save food, time and trouble, to say nothing of avoiding unpleasantness with neighbors who will appropriate fowls which stray on their premises.

Will Mayweed Drive Away Lice?

Mr. Editor:—I send you by this mail a package containing a plant that may be of some value to poultry keepers generally.

A few days ago an acquaintance, who is also a farmer, asked me if I knew of a weed that would drive lice away from the nests of sitting hens. I replied that I did not believe that any such plant had any existence save in credulous people's imaginations. He then told me that last spring he had sitting hens driven from their nests and broken up from

A Laying Hen

is a money maker. My

BARRED PLYM. ROCKS

are scientifically mated and bred for egg production. Catalogue free.

A. W. McCALLUM, Sibley, Iowa.

MINORCAS

Black and White.

I can furnish eggs or stock of both the above varieties from my prize winning pens.

J. W. DOUD, Turin, N. Y.

Before cold weather sets in again why not go through your outbuildings and see if there are any leaky roofs, any shingles or clapboards coming off, any cracks that need stopping up to make the buildings warm?

Remember your stock will do better if kept warm, chickens grow faster, hens lay more eggs, cows need less grain and give more milk. The best roofing and side-covering to-day is the celebrated *Neposet Waterproof Red Rope Fabric*. It can be used for roofing, covering sides and walls of houses, barns, hen-houses, green-houses, hotbeds, haystacks, wagon-tops, and many household purposes. It is very much cheaper than shingles or clapboards, and while it won't last forever, it lasts a mighty long time. With the necessary nails and tin caps to put it on, it only costs at the factory one cent a square foot. You see, a little goes a long way.

For inside lining use *Neposet Black Building Paper*. It is much cheaper than tarred paper, odorless, clean, economical, water and air tight, and vermin-proof.



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Our Light Brahmas are bred for strong frames, hardiness, good winter laying. If you want to infuse new blood in your flocks, try our cockerels. \$3 each for best; \$2 each for next best. A few grand year old hens for sale at \$2 each. A big bargain.

MICHAEL K. BOYER, Hammon, Atlantic Co., N. J.

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Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable, and cheapest first-class Hatcher in the market. Circulars free.

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COLDTHWAITE'S Continental Poultry Food

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PRICE, \$1.50 PER HUNDRED LBS.

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Complete set, with full instructions, post-paid, on receipt of \$2.50. 25p. Capon Book free for 2c. stamp. Poultry Marker. 25c. Roup Syringe, 10c. Gape-Worm Extractor, 25c. Remit by Money-Order or registered letter. G. P. PILLING & SONS, 1229 Callowhill Street, Philadelphia, Pa.

HENRY A. HOLCOMB, New Bedford, Mass.

Having put my best hens in large runs with clover knee high, can furnish choice eggs for fall sitting at \$2 for 15; incubator eggs \$6 per 100; have a fine lot of choice R. I. Reds, and White Wyandotte cockerels for sale which have free run of 50 acres meadow.

HENRY A. HOLCOMB, New Bedford, Mass.

FARM-POULTRY.

Semi-Monthly.

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EDITORIAL.

The New Standard.

We have filled over one hundred orders for the revised Standard already, and orders are coming in every mail; having the books on hand here at F.-P. office, we can now fill all orders at once they are received, so send in your Standard orders immediately.

A somewhat hasty examination of the book gives us a most favorable impression of its editing and make up, distinct gains having been made in the direction of clearness and conciseness, the page of "general disqualifications" at the head of the book eliminating a lot of needless repetition under the different classes.

The concentration is shown in the number of pages being reduced from 278 in the 1894 edition to 251 in this, and as the constitution and bylaws of the association are incorporated into it (filling nine pages) it will be seen there is a considerable gain. It is an excellent move, printing the constitution and bylaws in the Standard.

How Much Food?

In spite of repeatedly telling our readers that it is impossible to tell "how much" to feed a flock of fowls, there is scarcely a mail that doesn't bring us the same old question—not a few people seeming to think a poultry editor can tell exactly how many grains of wheat, oats, or corn, or how many "bites" of mash a fowl will eat. We publish one of those letters in this number, the writer asking that we favor him, as he is a busy man, with an exact bill of fare for his flock of about fifty birds, and give it to him "in pints and quarts," not in bucketfuls.

These letters would be amusing if they were not painfully serious. Why don't the writers stop and think a moment? Does the housewife know to an ounce how much beefsteak and potatoes, or corned beef and cabbage, or roast chicken "and fixins" the family will eat at dinner? As well expect to measure in

advance the appetites that will gather about the family board as determine the exact quantity of food a flock of fowls will eat,—and if our friends would stop to think a moment they would see that.

Fowls will eat more at one time or season than at another; one flock will eat (or require) more food than another; and there are constant variations that prohibit a fixed rule.

The only safe rule is to "feed what they will eat up clean and quickly." If any food is left fifteen minutes after feeding, the flock is overfed, and should have less next time. If they seem anxious for more, and to be searching for more, they are underfed—and should have a handful or two more.

The common sense and judgment of the feeder is to be used as to "how much" to feed; the quantity cannot be measured or weighed out in pints and quarts, or pounds and ounces.

To Cure Broodiness.

We received from a Pennsylvania reader a short time ago a package of pellets, with the request that we forward them to W. T. P., Leonia, N. J., who had a complaint as to broody hens in August 1st F.-P. The directions accompanying the pellets were as follows:

"Separate the broody hens, and place where they cannot get water except as you supply it. Leave them over night without water. In the morning dissolve ten pellets in half-pint of clean cold water, in a porcelain or earthen vessel, and give the hens nothing else to drink. When they begin to cluck less than at the beginning reduce the dose to six pellets per half-pint of water; and when they stop clucking let them out with the others, and I think they will soon go to laying. Avoid the use of tin or iron vessels in giving the remedy. It is just as well to remove the vessel after the hens have had all they will drink; set in the refrigerator or other cool place, and offer to them again when you think they are thirsty. This saves mixing again if they pollute or overturn the vessel, and keeps it cool and satisfying. Do not feed very heavy, but give what you think a laying hen ought to have. After you have tried this remedy, if you do, would you be kind enough to advise me of the result?"

We wrote to the Pennsylvania party that we felt obliged to decline to forward the remedy to the New Jersey reader, partially because we did not care to be a party to sending out a drug we knew nothing about, but more particularly because a remedy of that kind is absolutely unnecessary to break up broody hens. The directions require that the hens be put by themselves for three or four days and given this drug in their drinking water. Our experience is that it is an easy matter to break up broody hens by putting them by themselves in a broody coop, as we call it, where they are shut off from the nests, but can see the other fowls going about their business and in and out. Usually three or four days of such confinement will break up a broody hen, and she will go to laying again shortly.

Who could bother with removing the vessel after the hens have had all they want to drink, "set it in the refrigerator or other cool place," and offer to them again when he thought they were thirsty? We imagine the great majority of poultrymen would go out of the business if they had to daunce attendance upon broody hens after that fashion. If one had but a few dozen, and they were his pets he might do it, but with two or three or five hundred, where one is likely to have twenty or thirty, or maybe fifty broody at one time, from one to three in each broody coop, it would necessarily waste much valuable time. Fancy the amount of work entailed in removing the water dishes from the broody coops after the birds have had their drink, conveying the dishes to the refrigerator or some other cool place, and taking them back to the broody coops when it was thought the birds might be thirsty again.

Seriously, though, the problem of breaking up broody hens is very simple, if one goes about it rightly. We have a broody coop in each pen, to be used for breaking up the broody birds of that pen, then the birds don't get mismated or changed about from one pen to another. After two or three days imprisonment, when they have ceased to cluck they

are taken at night, and put back upon the roost, and the next morning find themselves going about their regular business. Should there be an exceedingly obstinate case, as might happen in a large flock a few times a year, a small pen in another house, without any nests in it, and tenanted by an active vigorous cockerel, would soon worry the broodiness out of the obdurate bird, and no drugs would be required.

The New Experiment Club.

Some applicants for membership in the new Experiment Club seem doubtful about sending in reports for October, as their flocks have not been sorted out, and pullets are not yet laying.

One writes as follows:

"Mr. Editor:—I have twelve nice pullets that have not begun to lay yet. Will I send in reports for them for October, whether they are laying or not—or wait until they begin to lay?"

G. S. B."

We want all new members to send in a report of some kind for October, whether their birds are laying or not. Begin with an October report, and let us know how you are handling your flock, and what they are doing. Of course if you can do so, we would like to have reports from pens that were made up October 1st. If you cannot do that, do the best you can.

Here is a letter from a member in the same fix, but he shows the right spirit, and will be with us:

"Mr. Editor:—My yard is hardly in shape to start with the club in its second year's work; yet I feel that I must begin October 1st with the rest.—so put my name on the list. In my yard are fifty birds: 14 hens, 13 pullets, and the rest cockerels. I cannot separate them, as I have only the one yard, but each week the male birds are becoming less in number. As a member of the club I have profited much by reading the reports of others, as they have been printed in FARM-POULTRY.

E. L. F."

Dr. Woods' Liquid Lice Destroyer.

We have had rewritten, and reprint in this number, the popular "Liquid Lice Destroyer" article, which was first published in F.-P., October 1st, 1896. Constant calls for that article have exhausted the extra copies printed. When it came to a question of reprinting the number, it seemed best to rewrite the article, as correspondence had revealed some points that could be bettered, and some changes could be made to improve it, so we asked Dr. Woods to revise it, add to or subtract from it as seemed best, and give F.-P. readers the advantage of two years test of and experience with the destroyer. This he has done, and the results are before our readers on the first and second pages of this number.

Experience Wanted.

We are constantly in receipt of inquiries as to where experience in handling incubators and brooders can be obtained, and not a few seem to think that not only the management of incubators and brooders, but the whole range of poultry experience, can be covered in a month or two. We recently received a call from a gentleman who is interested in poultry, and wanted to learn of some place where he could spend a month "learning the business." Here is a letter just received from a Buffalo, N. Y., reader:

"Dear Sir:—I am desirous of acquiring one or two months experience before I enter into the business, and I would ask if you would kindly put me in communication with some large broiler farms using Prairie State machines, that I might correspond with them with a view to getting this necessary experience of running incubators, managing brooders, etc. I already have some experience in keeping poultry for eggs."

It is easy enough to direct our friend to some large poultry farms, like Aratona Farm, Puritan Poultry Farm, Pequot Poultry Farm, etc., where Prairie State incubators are used entirely or largely. Whether they will receive him as a pupil or not, is another matter. What should he be willing to pay for his

instruction? Instruction takes time, requires patience and tact, qualities that are worth money. Is our friend willing to pay for such, granting that he finds them? This is destined to become an important question. In England it is customary to pay \$50 (10 guineas) for three months tuition at a practical farm, and the pupil boards and lodges himself. We imagine that some of our American young men would be surprised if told that they could attend at a poultry farm three months for \$50, and would receive a certain amount of practical instruction during the time; but we think it no more than right that they should do so.

The gentleman who called upon us recently and wanted to spend a month on a poultry farm learning the business, we advised to work on a farm a year, and told him it would be money in his pocket if he worked for nothing, and paid for his own board and lodging. We suggested a year's time, because the work varies with the seasons, and to master it thoroughly in all its details, would require fully that. We very much doubt, however, if he acts upon our advice. He, like a great many others, has but a dim idea of the magnitude of the poultry business, and the importance of learning it thoroughly.

A Broiler Plant Plan.

We want to call particular attention to the article, "The Broiler Plant of the Future," pages 346 and 347 of this number. Too many of the broiler and poultry plants of the past have been just "happen sos;" have been built without an intelligent purpose to combine the utmost possible advantages with the fewest possible disadvantages; in fact, they have pretty much "growed," just as Topsy did. We have long believed that some one would grapple with the problems involved, and would deliberately plan the buildings and lay out the plot of ground for a complete broiler plant, and this now appears to have been done by Mr. Payne in the plans and drawings submitted with this article. It looks right, looks business like, and seems based upon sound common sense principles; and we hope to see such a broiler plant built and operated upon business principles, just as a factory is built and operated. Broiler raising is a "manufacturing" of broilers; a broiler plant is a manufacture.

Instruction and Wages.

Since writing the article, "Experience Wanted," which appears in this number, we have had a call from a friend who put an ad. in FARM-POULTRY for a young man to learn the poultry business. He had nearly twenty replies, and handed us a packet of the letters to look over. Nearly every one who answered the advertisement was concerned about the "wages" they would receive, and asked such questions as: "What wages will be paid?" or "How much can I earn beside my board?" and one bluntly asked if his "fare" would be paid in addition to wages and board. "What do these people expect?" asked our friend. "Do they think a man will take a young man onto his place, teach him the ways of doing the work, and pay him besides?"

We know of one man who won't, and this advertiser has hired an experienced man, saying to us: "If I've got to pay for doing the work, I don't want a man I've got to go around with half the time and see that he does it, and tell him how to do it. I thought the opportunity for instruction ought to balance the work one of them might do; but they want the instruction and 'wages' also."

This is a curious mental state on the part of those who answered our friend's advertisement. It is the "wages" they want; they give never a thought to the opportunity offered them to "learn" a business, to fit themselves for a position worth a good deal to them, or to gain valuable experience at the expense of another.

We don't wonder our friend is disgusted, and has dropped the instruction idea.

More Than Ten Others.

Please send a sample copy of FARM-POULTRY, as I would like to try to induce a friend of mine to take it. I think there is more poultry knowledge in one FARM-POULTRY than in ten other poultry papers combined.

Perth Amboy, N. J.

C. P.

ANSWERS TO CORRESPONDENTS.

Correspondents who enclose stamps for reply receive immediate answers by mail. When no stamps are enclosed questions which are of general interest and have not recently appeared here are printed with answers in this department. Several correspondents sometimes write at about the same time to ask the same question. Of course only one inquiry is printed. Look for the answer to your question, not for your initials and residence.

Questions Briefly Answered.

[Any of the numbers of FARM-POULTRY referred to below, will be supplied at the rate of five cents each].

WATERPROOFING CLOTH.—(L. C. Saugus, Mass.): A recipe for waterproofing cotton cloth was given on page 196, May 15th, '98, F.-P.

FEEDING BURNT WHEAT.—(L. T. G., Sanford, N. Y.): Don't feed burnt wheat. See article, "Scored Wheat," page 185, May 15th, '98, F.-P.

EXHIBITION COOPS.—(R. H. W., Bellville, Ohio): You will find an illustration and description of a good exhibition coop on page 315, Sept. 15th F.-P.

FEEDING BARRED P. ROCKS.—(S. I. S., Montpelier, Vt.): You will find a good winter egg ration for Barred P. Rocks in the article, "Feeding Fowls for Eggs," Nov. 15th, 1897, F.-P.

DIARRHOEA.—(E. S., Penn.): If diarrhoea is not very severe turn the chicks out to grass, and feed almost wholly on whole wheat. Put a little tincture of iron in their drinking water, or put in a handful of rusty nails. If the diarrhoea is very severe, give each chick so affected a teaspoonful of castor oil, following in about half an hour with a five grain dovers powder.

NEPONSET ROOFING.—(E. K. II., Kingston, Mass.): You can get Neponset red rope roofing at hardware stores, or of dealers in roofing materials in Boston. You should be able to get it of a hardware dealer in Plymouth. Write F. W. Bird & Son, East Walpole, Mass., and ask them who is their selling agent there.

SQUAB BROILERS.—(J. S. B., Huntington, Pa.): Squab broilers are chicks of about one pound weight each. There is a rapidly growing demand for this delicacy, and we know of one breeder who marketed all of his chicks in that manner, getting from \$1 to \$1.15 per pair for them.

Florida Questions.

Mr. Editor:—1st. Can ducks be made to lay during fall months, say September, October, and November, and in the winter also, and give moderately fertile eggs? If yes, what are the conditions required?

2d. Do the prices of eighteen to fifty cents a pound for ducklings, which I find mentioned in Mr. Rankin's "Duck Culture," and some poultry papers, conform to the reality? I cannot find those prices in the market review of FARM-POULTRY.

3d. Could a man obtain those prices shipping from Tampa at the time of those prices? Rates are \$5 to \$6 per hundred pounds. Would you advise anybody to go into duck raising with this discount of five to six cents a pound? Prices of food about the same as in the north. Would we be troubled by climatic conditions?

4th. What is the best time for early broilers? Could the south compete with the north under aforesaid conditions?

5th. Can broilers be raised successfully to meet a local market in January, February, and March?

6th. What is the cause of failure of brooder house in rearing small chickens? S. L. Tampa, Fla.

1st. Yes, ducks can be made to lay during the months of September, October and November, and through the winter, and one could expect reasonably fertile eggs if he made the conditions right. One would need to hatch the ducks early, and have them well matured so as to reach laying maturity by August, and that, in your climate, would not be difficult. They can be induced to lay by increasing the meat meal portion of their ration, and to get reasonably fertile eggs you would want good strong vigorous drakes with them.

2d. Those were the prices of ten or fifteen years ago, but prices have since been gradually falling off, until this present year the market has been so overloaded that there has been hardly any sale for ducklings at any price.

3d. A man in Florida could obtain the market prices if he shipped good stuff to the

market and it arrived in good condition. That last is a very important factor at your distance. It is doubtful if either ducklings or broiler chicks could be shipped so far and kept in good condition unless shipped in refrigerator cars, which would be so expensive it would eat up all the profits, and perhaps more. Under those circumstances we would certainly hesitate about embarking in the business so far from the market.

Isn't there a good local market at the great hotels in Florida for both ducks and broilers in the winter months? We would certainly expect that such would be the case, and think you can by inquiry establish the fact. Florida has in the winter months a large transient population, which is in the main used to living well, and demands good living. We would think it would pay you best to cultivate that home market.

4th. We would think the time when they would be wanted in your own market. The best prices in the north for broilers are in March, April, May and June, although there is a light demand all the year.

5th. Yes, most certainly, if you adapt your work to local market conditions. To have broilers to market in January, February and March you would want to have fertile eggs in September, October and November. We would not, however, depend upon hens to do the hatching, either in those months or any other months. Anyone raising broilers must depend upon incubators and brooders.

6th. Defective constructions resulting in insufficient heat in time of need, and improper and insufficient ventilation. In your climate that ought not to be a great difficulty, because your mild winters ought to make it comparatively easy to brood chicks.

We have not visited Florida since 1863, hence know nothing of your special conditions there; but we think if we were in the broiler and poultry business in that climate we would use brooders, and set them out of doors where the chickens could run on the ground and have plenty of fresh air and exercise. We don't believe you would need a brooder house at all. You rarely have freezing temperature, and we almost always have freezing temperature here after our brooders are put out of doors and filled with chicks; in fact, we have had a heavy snow storm on them, and actually had to shovel out to our brooders — and you have nothing in Florida more severe than that.

Poultry House Plans.

Mr. Editor:—I am looking around for plans for a poultry plant to accommodate a few hundred fowls. It will be located in northern Pennsylvania, and is to be especially adapted to egg production, in as economical a way as is consistent with good egg production. In looking over June 15th FARM-POULTRY I noticed an article from you with a cut of your scratching shed house, which seems to me a good plan, so far as I can see. I have had good success in Virginia with fifty fowls in one pen, and have thought I would model the larger plant on same plan, but your idea of twenty-five birds in a pen and shed presents itself favorably to me.

1st. Can you keep fowls warm enough in winter to insure good egg yield?

2d. Do you think egg yield enough more to pay extra expense of keeping twenty-five instead of fifty in a pen?

3d. What plan of brooder house do you recommend? H. C. Saltville, Va.

1st. Yes, we strongly recommend that scratching shed plan, and believe that it pays well to give the fowls as much room as is recommended there, housing twenty-five fowls in a pen and shed 10 x 18 ft., and we believe better results will be obtained in housing twenty-five in such quarters than fifty in a larger pen all together.

2d. Yes, we can keep fowls warm enough in a house built as there described, so that they will lay well all winter. Fowls are warmly clothed when well fed, and when induced to exercise for their food will keep in good laying condition.

3d. You will find plan of brooder house we prefer in March 1st, 1898, FARM-POULTRY.

To Fight Hawks.

Mr. Editor:—I have a hard time fighting chicken hawks. Please give me any information you can that will help me. R. G. Mentor, Ohio.

A good way to fight hawks is to shoot them, which, of course, means being quite constantly on the watch, with a gun at hand, and one

needs to be a good wing shot. Another good method is to trap them by setting traps on top of posts about ten feet high. The hawk will light upon the post, the better to swoop down upon its prey, and the trap nabs him. Of course, the trap must be fastened to the post. Another good method is to set steel traps on top of fence posts at different places, and bait the traps with dead chicks. This is said to give good results.

Trespassing Hens and Cats.

Mr. Editor:—Will you please give in FARM-POULTRY the law in regard to hens running in neighbor's garden? I have a \$150 hen yard, and keep my hens shut up, but my neighbors' hens and chickens are in my yard most of the time.

Also, about shooting cats—If I shoot them in my own land. I have shot a few, and have not been hung yet. D. O. E. Williamstown, Mass.

We are not sure, but think you have a perfect right to shoot your neighbor's hens and chickens that are trespassing upon your garden, after you have given the owner notice (preferably in writing), that his hens are trespassing, and are liable to be killed. We have been informed that that is the law in Massachusetts, but will take pains to ascertain more fully. You would certainly have a right to proceed against the owner for his hens trespassing, just as you would for any other animal, as a cow or hog that trespassed and did damage, and you can make the owner pay damages.

As to the cats, we think you have a perfect right to shoot them when they are trespassing on your land. You will, of course, "get yourself disliked" for so doing, but that is of small consequence if you succeed in getting rid of the cats.

Mash for Breakfast. Too Much Glass.

Mr. Editor:—Would you feed mash directly after the fowls come from the roost?

Part of my house was an open front carriage shed, and I put in the front some large double windows which I had on hand, as I could not afford to buy new. Now I think they are too large, being 3 x 6 ft., and I have two in the south front, which is 14 ft. wide. Would you board over the top of them on the outside — and how much? I give my fowls the very best of care, cleaning out every morning. I feed them regularly, and give good variety of food. T. G. D. Lowell, Mass.

Yes, we believe better results are got feeding the mash for the fowls' breakfast the first thing in the morning.

We think that is twice too much glass, but it would be better to take out one window and board it up, rather than board over the tops of two windows. Your light and sunshine will thus be more evenly distributed over the pen.

For Best Results.

Mr. Editor:—I have been an appreciative reader of FARM-POULTRY for a number of years, and ask you to kindly answer the following questions. In the July, 1894 number you gave a table entitled, "A Study of the Egg Yield for Six Months," it being the egg yield of several different pens, some being hens and some pullets. In keeping a record of those different pens, what object had you in doing so?

Were all pens fed alike, or was each pen or breed fed differently in order to produce the greatest number of eggs?

What object had you in publishing this table? New Albany, Ind. W. E. K.

Our object in keeping the record of those different pens was to test the laying qualities of different varieties, and also of hens and pullets. The pens were all fed alike, or as nearly alike as possible, the intention being to influence the best possible egg yield. The object in publishing it was to impart valuable information to the readers of this paper.

CLOSING OUT

All my Blue Barred Rocks, prize winners and all, as I shall breed my strain of **STAY WHITE** White Wyandottes exclusively hereafter. There's a chance to buy specimens for which good offers have been refused with all their progeny. Sold in lots of 10 or 25 if desired. J. H. THOMPSON, 13 Emerson St., Haverhill, Mass.

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White Langshans.

Mr. Editor:—I read in a paper about White Langshans. Please tell me as soon as possible if they are the same in utility as Black Langshans, namely, about egg production, meat, weight, etc. I would cross my poultry with a Langshau.

2d. How many years are the White Langshans on the market?

3d. Can you tell me out of what poultry crossed, they get White Wyandottes and White Plymouth Rocks? F. C. D. Rockville Center, N. Y.

The White Langshan should be of the same general character and standing as the Black; should be as good an egg producer, as good a meat producer, and of the same weight. We have the impression, however, that the White Langshans are very little bred, and don't recall having seen an advertisement of them in a long time.

2d. We think they were first put on the market some eight or ten years ago, but for the last two or three years have seen or heard very little of them. They made no class at the last New York show, and the few that were there appeared under the title, "Any Other Color Langshans."

3d. They are sports from the Silver Wyandottes and Barred Plymouth Rocks; that is, White Wyandottes sported from the Silver Wyandottes, and White Plymouth Rocks from the Barred Plymouth Rock.

You will find a full history of the two breeds, — White Wyandottes in October 1st, '95, FARM-POULTRY; White Plymouth Rocks May 1st, 1896, FARM-POULTRY.

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WHITE PLYMOUTH ROCKS.

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Breeding and exhibition cockerels \$2.50 up; pullets \$2 up; 2 yearling cocks \$3 and \$3.50. Pen of 4 good yearling hens and fine cock good enough to show, \$15. Pen may be sold at once.

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No does to spare. A few very choice bucks, 6 mos. old, that will win for you, at \$2 and up. Our best buck is a Boston '98 winner. If you mean business and want good stock for your money, and square treatment, write us.

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Mixed Eggs in an Incubator.

Mr. Editor:—Will Leghorn eggs hatch in an incubator with either Plymouth Rocks or White Wyandottes?

P. S. B.

Tom's River, N. J.

Yes, but probably better results will be obtained by hatching the Leghorn eggs separately, for this reason:—Leghorn eggs hatch rather more promptly, perhaps half a day earlier than Wyandotte or Plymouth Rock eggs, and the changed conditions within the egg chamber of the Leghorn chicks being there, would be a handicap for the Wyandotte and Plymouth Rock eggs. The same would apply to putting Brahma or Cochins in an incubator with Wyandotte or Plymouth Rocks. We have done that, putting the Brahma eggs in half a day earlier, so as to give them that much handicap, with fairly good results; and it is probable that if you put the Leghorn eggs into the machine half a day later than you do the Wyandottes and Plymouth Rocks, the conditions would be more equable. Still, as a rule, it would be better to hatch the Leghorn eggs by themselves.

Provender and Meat Meal.

Mr. Editor:—Will you kindly explain in the correspondence column of FARM-POULTRY what is provender?

Also, what is meat meal, and where can it be bought? I have tried every place in town, but cannot get it.

H. C. D.

Provender is a mixture of grains ground together, usually corn and oats, for food for horses. The mixture differs somewhat in different localities, and you might not get in one part of the country the same meals or the same proportion of meals, under the name of provender, that you would in another.

Meat meal is meat and bone, usually the waste pieces of meat, cooked by steam at a high pressure to extract the fats, then kiln dried and ground to a meal. The commercial meat meals in the market carry about thirty per cent of bone. Any dealer in poultry supplies ought to be able to furnish it to you; or you can get it of the manufacturers who advertise it in our columns.

Black Leghorn Book Wanted.

Mr. Editor:—Do you know of a good book written on Black Leghorns? I have twenty nice Black Leghorn pullets, but intend to keep about fifty another year.

I would like to find out also whether the Black Leghorn can have green legs. All of mine have them, as well as a five dollar cock owned by the man I purchased my eggs of. I met a man at the county fair who had a pair of Black Leghorns there, and he claimed they ought to have yellow legs.

Amsterdam, N. Y.

We do not know of any book upon Black Leghorns only. There is an excellent book published in England, "Leghorns, All Varieties," by Harry Hesford, which we will have sent you by mail postpaid for sixty cents. It has a chapter on each variety of Leghorn, including Black.

The man at the county fair was right about the color of the legs. The Standard for Black Leghorns, under "Legs and Toes," says, "Shanks long, and in color yellow or yellowish black; toes yellow or yellowish black;" and under disqualifications, says, "Shanks other than yellow or yellowish black in color;" so your Black Leghorns with green legs would be disqualified. Mr. Hesford's book says that "a curious point about Black Leghorns is, that though cocks will come with really good yellow legs, it is extremely rare to find such the case with hens;" and, in another paragraph he says that "these defects by careful mating can be eradicated, I feel sure, although I have heard it stated by naturalists it is against nature to produce a solid black bird with pure yellow legs, the more natural color being mottled legs."

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ROSE COMB Black Minorcas, Northrup strain. Seven entries at recent Mt. Gretna, brought 5 prizes, two 1sts and three 2ds. A few cockerels and pullets. H. W. Bohu, 34 N. 9th St., Reading, Pa.

EXHIBITION and practical purpose birds. Cocks, hens, cockerels and pullets, \$2 and up. H. Story, 187 Arlington Ave., Brooklyn, N. Y.

WHITE MINORCA hens and cockerels for sale cheap. E. L. L. Mansfield, Swampscott, Mass.

S. C. B. MINORCAS, Northrup strain. Choice young stock. G. F. Barker, St. Albans, Vt.

SINGLE COMB Black Minorca hens and pullets \$1 each; ck's \$2 to \$3, Northrup and other leading strains. Rose Comb cock's (Northrup) \$3 to \$5. M. V. Allen, Ovid, N. Y.

S. C. B. MINORCA pullets, \$2 each. March and April hatched, standard bred for layers of extra large white eggs. Free range of 50 acres. Fine pullets and cockerels for fall and winter shows. Mrs. Geo. E. Mourac, Dryden, N. Y.

ORPINGTONS.

BUFF Orps., cock's, pull, prize winners, prolific. Cooley Poultry Farm, Dursley, Glos., England.

PLYMOUTH ROCKS.

FOR SALE—30 B. and Wh. P. Rock hens and pullets. Fine breeders. Oakland Farm, Kelsey, O.

BUFF P. Rock cock's and pullets, from prize pens Boston, Amesbury, Beverly, Essex Co. April hatched. Frank Woodbury, 20, Beverly, Mass.

70 WHITE Ply. Rock pullets, Billibrown strain, hatched Apr. 8. Knowles, No. Billerica, Mass.

B. P. ROCK cockerels, Utility, business bred, \$2 and \$3 each. E. W. Harris, No. Acton, Mass.

FOR SALE, stock from utility bred Buff Ply. Rocks. Mrs. A. L. Powers, Leominster, Mass.

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100 LETTERHEADS, Envel. or Tags, for 35c. Write. A. E. Benn, Amsterdam, N. Y.

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RHODE ISLAND REDS.

R. I. REDS that fit the name. 100 for sale. R. V. Browning, Natick, R. I.

SILVER GRAYS.

25 NICE cock's from Kenilston's stock from \$2 to \$3 each. A. R. Leighton, Haverhill, Mass.

WANTED.

BY competent man, position as ass't or manager, or to establish duck ranch. References given and required. Address, "Poultryman," care F. P.

WANTED a poultry farm, buy, lease or run on shares; large experience, farm must be near good market. State full particulars. R. W. Smalley, Box 72, Weston, Mass.

WANTED, Strictly fresh eggs in 20 dozen crates and best dairy butter in 5-lb. crocks for family trade. State price to David Carruthers, 467 DeKalb Ave., Brooklyn, N. Y.

WANTED, Work on a poultry farm by a well educated and careful young man twenty-one years old. J. B. Norton, Manhattan, Kans.

WYANDOTTES.

GOLDEN WYANDOTTES, clear open faced birds from neck to tail. Young stock Sept. 1st. Sylvan Poultry Farm, Bernardston, Mass.

WYANDOTTES, White and Buff. Enquire about them. S. H. Bellows, Athol, Mass.

W. WYANDOTTE cockerels and pullets, vigorous, farm raised birds from extra fine laying stock, \$1 to \$5 each. F. O. Price, Bridgewater, Mass.

WHITE Wyand. yearling hens, pullets, cocks and cock's. A. M. Jerauld, N. Attleboro, Mass.

1776 FARM, Warner, N. H. Prolific br. egg farm raised W. Wy., Bar. P. Rocks, C. I. Games Lt. Brahms. Stock \$1 to \$3. Satisfaction.

COCKERELS and pullets, early farm raised, well marked, from noted strains heavy laying Wyandottes. In Jan., Feb., Mar., Apr. 12 laid 912 eggs; equals rate of 228 per year. Sil., Gol., Buff and White, \$1 to \$3. Satisfaction. S. B. Patton, Box 128, New Castle, Pa.

WHITE Wyandottes, bred on scientific principle "survival of the fittest." Fine specimens of early show birds, breeders and yearlings, at prices to please. Won prizes in the past, can win prizes this season. No better strain in U. S. for all purposes. Circular and hints free. G. A. Ed. Reynolds, Marlboro, Mass.

SILVER, BUFF, Good birds, \$3 to \$6. Dr. N. W. Sanborn, Wellesley Hills, Mass.

20 BREEDING pullets, Hunter str., W. Wy., \$1.50, \$2 ea.; 13, \$5; 5, \$3; 10 culls, \$1 ea.; roosters \$2 and \$2.50; hens \$1. W. W. Bohu, Robesonia, Pa.

FOR SALE—150 W. and S. Wyandotte hens and pullets. Sure to please. Oakland Farm, Kelsey, O.

WHITE WYANDOTTES, Hardy's White Wyandottes are winning at all of the large fairs this season. I was awarded all of the first prizes at the New England fair, Portland, Me.; first and second at the Rochester, N. H., state fair. Some fine cockerels and pullets to spare. Clover Hill Poultry Yards, C. H. Hardy, Prop., Box 108, Groveland, Mass.

EXTRA nice W. Wyandottes, cock's and pullets. G. L. Hoyt, Waltham, Mass. Telephone 110-3.

WHITE Wy. cock's. Good stock \$1 and \$2 each. E. W. Hutchinson, 43 Spring St., Medford, Mass.

WHITE Hunter and Norton strains, March and April pullets \$1, \$2; cockerels \$2. F. E. Bancroft, Groveland, N. Y.

COCKERELS, I have some fine birds of Rush Vaughan's brown egg strain of mammoth White Wyandottes that I can spare at \$2 each. F. W. Wells, 8 Wall St., Rochester, N. Y.

WHITE Wyandotte April hatched cockerels from brown egg heavy laying strain, \$2, \$3. J. F. Dimmock, Pocomsett, Mass.

SILVER Laced Wyandottes, evenly laced, and cheap. Send for price. John S. T. Wallace, Barnet, Vt.

DO YOU want White Wyandottes and R. C. W. Leghorns, bred for layers, also size, vigor, nice shape, yellow legs and skin? Fine yearling Leghorns, 75c. each; Wyan, \$1 up. W. V. Ransom, Hiram, N. Y.

BUFF and White Wyandottes, up to date stock. Write for description and prices. C. S. Johnson, West Brookfield, Mass.

MY WHITE Wyandotte eggs won first at Boston show, 1893. I have some choice cockerels for sale. Would spare a few pullets. All bred from same pen that produced prize eggs. W. E. Sargent, Lancaster, Mass.

WHITE WYANDOTTE pullets and hens, \$1. Write. O. O. Alley, No. Conway, N. H.

WHITE Wyand. cock's from my str'n of business birds, \$2 up. J. H. Fleming, Dunellen, N. J.



THE CHALLENGE INCUBATOR FACTORY.

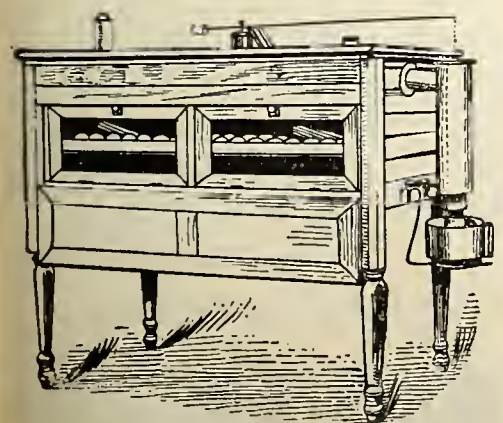
A New "Challenge" Incubator.

The Challenge incubator has an enviable record of pleased customers and wonderfully good hatches, notwithstanding which the inventors set about devising a less expensive machine, being convinced that the great majority of the buyers wanted incubators at a lower price than a first class hot water incubator could be built for. After three years experimenting and testing, they have constructed a hot air machine, with a single coil of hot water pipe about the bottom of the egg chamber, which they confidently believe will give better results than any other moderate cost incubator, and which they are now prepared to put upon the market. Having heard rumors of this new incubator, we journeyed to South Peabody a few days since, to see it, feeling sure that F.-P. readers would be interested to read about it.

Messrs. Wood & Paige, manufacturers of the "Challenge" incubator, formerly did business in Lyuu, Mass., but needing more room, and desiring to have a practical poultry plant in connection with their incubator and brooder business, they bought a tract of land in the adjoining town of Peabody, (in South Peabody, near Vaughan's station), erected a factory and a large and well equipped poultry plant, in which they carry some five hundred head of laying fowls, and hatch out thousands of chicks annually; this department of the business, however, merits a separate article.

The new incubator was what we went to see, and we were fortunate in finding one of them in operation in the office of the factory. It is a hot air incubator, and looks not unlike others of the type, excepting that this is double walled throughout, and has double doors—the thorough construction and careful workmanship for which the firm is noted attesting the attractive appearance of the machine. There is nothing "tinsel" about it, nothing put on just for looks; it is built for business, and in a thoroughly workmanlike manner.

Thermometers set in several different parts of the egg trays showed a remarkably uniform

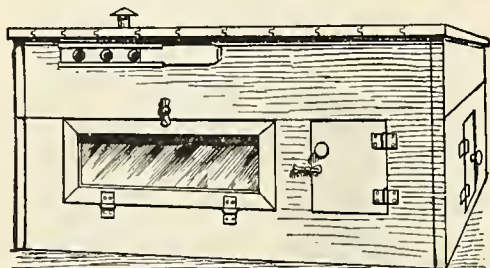


THE NEW CHALLENGE INCUBATOR.

temperature throughout, and the coil of pipe around the bottom of the egg chamber diffused slight currents of warmed fresh air through the chamber, and at the same time kept the lower half of the egg chamber of an even warmth throughout. This appeared to us to be an excellent feature, small ventilating apertures just beneath the pipe admitting the

air, which is warmed in passing over the pipe into the egg chamber. The water passing through the coil of pipe passes around a bulb set in the base of the heater, which has the added advantage of always keeping the lamp burner cooled down to the temperature of the water, avoiding the risk of the burner becoming overheated and taking fire.

Ventilation is provided for by perforations in the cap covering the regulating rod, which passes up through the top wall of the machine, and connects with a lever which lifts the damper on top of the heater. Two thermostatic bars, one above and the other below the egg trays, are firmly fixed to the regulating rod, and excess or shortage of heat, either above or below the egg trays, operates the



THE NEW CHALLENGE BROODER.

regulating lever which contracts the heated air within the heater. Every possible contingency seems to have been considered and provided for; the regulation appears to be perfect; the heat is distributed over all parts of the egg chamber, and is exactly uniform throughout—and the new "Challenge" enters the field with a certainty of pleasing the buyers, as it will be sold at a price that is as low as a really good incubator can be made for. We look for a great sale of this new incubator.

A new brooder next attracted our attention, an individual hot water brooder, which looks to be an excellent one. A circular tank about twenty inches in diameter, by two and one-half inches thick, contains the water, and is the "hover," under which the chicks cuddle. A lamp heats the water by a flue passing through the circular tank, an even temperature being secured by upper and lower connecting pipes that cause a flow of warmed water in at the top, and of cooled water out at the bottom. The brooder is three feet square, containing nine square feet of floor space,—ample room for fifty chicks,—and can be sold for nine dollars, a quite moderate price for a good brooder. As it is either an indoor or outdoor brooder, the heat easily adjusted to either (or any) condition, it will be popular.

In this issue appears the advertisement of the Chapman Mfg. Co., (Incorporated), manufacturers of the "Ideal" Green Bone Cutters and other up-to-date machinery for poultry men, farmers and dog fanciers, which include some new and novel appliances in a different line than anything that has ever been offered to the public by any other manufacturer, being the original inventions of Mr. A. H. Chapman, who placed on the market the first bone cutter with roller or ball bearings that the world ever saw. The company's factory is equipped with the best machinery, tools and appliances that money and skill

can produce, placing them in a position to turn out the very best work, and enabling them to fill orders promptly. Read their advertisement, and, when you write them, say you saw it in FARM-POULTRY.

WYANDOTTES.

WHITE, SILVER, GOLDEN AND BLACK.
Won on White Wyandottes at Boston, '97, 1st and 3rd on pullet; 2nd on pen. On Golden Wyandottes at Boston, '98, 2nd on cock; 2nd on cockerel; 3rd on pullet. Hays in my yards pen of Silver Wyandottes that received 1st at Boston, '98; also 1st prize Black Wyandotte hen in same exhibition. Stock for sale.

W. FRED MUNROE, Peabody, Mass.

Cockerels \$3. Pullets \$2.

—FARM RAISED—

WHITE WYANDOTTES,

Hawkins strain.
Excellent winter layers and general purpose fowl.
C. S. WETMORE, Box 229, Lockport, N. Y.

No Artificial Moisture

used in the

Star Incubator.

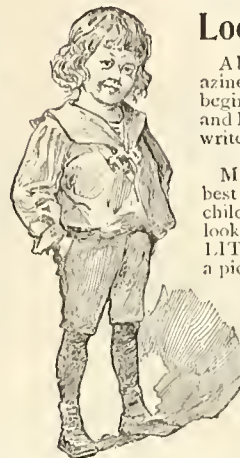


None needed, because our perfect ventilation preserves the natural moisture supplied from the egg. Nature's Way—No Guess Work.
We guarantee satisfaction to every purchaser, or return money without question. You should at least look into our claims for this machine. Our catalogue is free.

STAR INCUBATOR & BROODER CO.,
Box 28, Bound Brook, N. J.

LITTLE FOLKS

For Youngest Readers,
Little Listeners, and
Lookers-at-Pictures.



A beautifully illustrated Monthly Magazine for young children. Volume II begins with November. Edited by Mr. and Mrs. Pratt, with a corps of the best writers and artists.

Mothers who wish to provide the very best reading and pictures for their young children, that will be read and reread, and looked at and looked at, welcome LITTLE FOLKS. It is a story-teller, a picture book, a play-fellow, an out-of-school magazine. Its fun is of a simple snuggly sort. Its little tales of children possess an ethical value—they stimulate their readers and hearers to be fearless, cheerful, unselfish, and above all true and honorable. All stories of a painful kind are excluded, especially such as would haunt nervous and imaginative children. There is much curious and interesting natural history, also play-work for little fingers. The poems include good pieces to speak in school.

PRICE \$1.00 A YEAR. SEND FOR SAMPLE COPY.

Good Agents wanted in every place.
Liberal commissions to the right people.

Any subscriber who after four months is not satisfied with LITTLE FOLKS can have the full subscription price refunded, or it will be sent to any one of good standing subject to payment after four months if the magazine proves satisfactory.

Address S. E. CASSINO, 218 Columbus Ave., Boston, Mass.

- FISHERS ISLAND FARM -

We have several hundred extra fine Cockerels bred from our best birds, which won many prizes for us last season.

Barred, White and Buff Plymouth Rocks; Cornish and White Indian Games; Pekin Ducks; Ring Neck Pheasants; Bronze Turkeys, and Belgian Hares.

Write For FREE CATALOGUE.

We won more than two-thirds of all prizes competed for by us at New York, Boston, and Hagerstown last season.

E. M. & W. FERGUSON, Proprietors,

Via New London, Conn.

Fishers Island, N. Y.

COBURN'S BARRED PLYMOUTH ROCKS and WHITE WYANDOTTES.

Our Rocks won five prizes at Haverhill, '97, (A. C. Hawkins, judge), including the principal prize, 1st on pen. Selected birds for sale in both young and old stock. Choice W. Wyandotte cockerels. Write for circular and prices.

F. A. P. COBURN, B. 759 Stevens St., Lowell, Mass.

Egg record sheet free to customers. Others send two 2c. stamps.

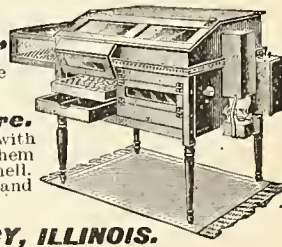
The Peerless Incubator

Hot Air or
Hot Water

machines, as you prefer, are perfect in the application of heat, ventilation and moisture.

Either combined incubator and brooder or single machines. The only machine with a specially constructed Nursery for Chicks under the Egg Tray. Removes them from the intense heat and saves the tenderlings that have just come out of the shell. We also handle a full line of Poultry Supplies all bearing the standard brand "Peerless." Write for what you want. New Catalogue, 4c. in stamps. Better send for it at once.

THE PEERLESS COMPANY,
Box 44, QUINCY, ILLINOIS.



YOUR SERVANT AND PROTECTOR.

No home is complete without a Scotch Collie dog to protect it. It is needed as a companion and protector for the children. The useful duties they can be taught to do in the care of stock, etc., is simply marvelous. For the best that cost the least money address.

POTTS BROTHERS, Parkesburg, Chester Co., Pa.

The Cheapest and Best

Four Poultry Papers and Two Books, for \$1.25.

FULL VALUE, \$3.00.

The best is always the cheapest in the end, even though the cost be more. But when a poultryman can get four of the best poultry papers for practical purposes, and two such books as offered below, for a trifle more than the cost of one of the papers, it is a chance no one should let go by.

On receipt of cash \$1.25, we will send to any single address, as follows:

FARM-POULTRY,	semi-monthly, one year,	price, - -	\$1.00
POULTRY KEEPER, in colors,	monthly, one year,	price, - -	.50
INTER-STATE POULTRYMAN,	monthly, one year,	price, - -	.50
A FEW HENS,	monthly, one year,	price, - -	.25
Book BROILERS FOR PROFIT,	by M. K. Boyer, price, - -		.50
Book A LIVING FROM POULTRY,	by M. K. Boyer, price, - -		.25
Total,	- - - - -	- - - - -	\$3.00

The four papers one year and the two books, all post-paid, for \$1.25. Send all orders to us. The combination cannot be changed or filled as above, unless all ordered at one time. I. S. JOHNSON & CO., 22 Custom House St., Boston, Mass.

Incubator Cellar, and Height of Ceiling.

Mr. Editor:—Is a cellar with newly cemented floor, and walls just whitewashed, safe to put incubators in and start them at once?

2d. Is a ceiling six feet high in a 6x6 roosting room too low? The house is nine feet high at roosting place, slanting down to five feet in the front, and scratching pens are 12 x 6. The whole house is 30 x 18, divided in five apartments, 18 x 6. C. R.

Grand Rapids, Mich.

Yes, your cellar would be perfectly safe, because your cement floor would dry in a day or two in August, and whitewashed walls ditto, and it would take two or three days to get the incubators warmed up, (regulated properly), to put eggs in.

2d. Much would depend upon the number of birds in the pen. Generally speaking, it would be wise to have a ceiling as high as possible, even to the extent of ceiling directly upon the rafters, because the higher ceiling the more air space, and in bringing the ceiling down to six feet you cut off nearly a third of the air space.

We do not like your plan of house, nine feet high at back slanting to five feet in front, for the reason that you get the sunshine on the roof instead of into the pen where you need it. Then, too, with the roof slanting front, you get your drip in front, which means it is wet there, instead of a dry sheltered place. We can but think you have made a mistake in building a house 30 x 18. If you had stretched the building out to 60 x 10, 8 ft. high front and 5 ft. back (or 7 ft. high front and 4 back), you would have got a house that would have given you much better results.

A Loosening Mash. Early Moulting.

Mr. Editor:—Is it right to feed a mash half of which is vegetables and fruit, and the other half mixed meal, such as bran, corn meal and middlings, equal parts by measure—or would it cause fowls to have looseness of the bowels, and liver disease? I have fed considerable fruit and vegetables lately, having a lot of peelings of apples, pears and potatoes, and whole tomatoes. Not wanting them to go to waste, I cooked them all every day in the mash, which made about half the quantity of the mash, and my hens seemed to have a little looseness of the bowels, and some of the droppings are yellow. I am afraid they might have liver complaint. Would the mash be the cause of it?

2d. Some of my hens are moulting since the last part of August. Is not this too early for them to moult? I understand by FARM-POULTRY that you expect hens to moult about in October. Would you give them the same ration and the same kind of food when they are moulting as when they are laying?

Windsor, Ont. N. R.

The looseness of bowels is probably caused by excess of fruit acids in the mash,—apples, pears and tomatoes furnishing a considerable quantity of fruit acids. We would suggest that you feed less of those and increase the quantity of bran and middlings in the mixed meal, and note results. It would be better to let some of the fruit material go to waste than to make your fowls sick consuming it.

2d. An early moult is very desirable, because the hens grow their new suit of clothes more easily in the warm weather, and will the sooner return to laying giving you eggs at the time of highest prices. Many poultrymen aim to induce an early moult by adding a small portion of linseed meal to the ration, and somewhat increasing the quantity of meat meal.

Indigestion. Poor Circulation.

Mr. Editor:—Last year a large lot of chickens which I took unusual pleasure in looking after, died. They began jumping around as though they couldn't walk. They continued in this condition, gradually getting weaker for weeks. Their combs were red, and they seemed healthy. I replenished my stock in the fall. Now one is acting the same way—been getting worse for three weeks. Yesterday I caught her, and noticed a knot the size of a walnut between the toes on each foot. They were hard, and when cut into I found nothing but very black blood. Can you advise me what is the trouble, and the remedy?

Delaware. C. W. K.

When we get letters of this kind there are lots of things we wish we knew. We would like to know how these fowls are housed and fed, and what kind of fowls they are. We would like to know if this correspondent really means that those lumps were the size of a walnut, or if he meant a hickory nut. A lump the size of a walnut would be a pretty large lump, and it would not be necessary to catch the hen to discover it. The probabilities are that the lumps were not as large as either of the similes mentioned.

It looks very much as if these birds had been killed by kindness (?) that is, overfed or

fed on too highly concentrated food. If you are using any of the highly concentrated foods now on the market, it will be a wise thing to do to reduce them by adding a large percentage of bran. That swelling between the toes was probably the result of impaired circulation, dependent on disturbance of the digestive organs, especially the liver. "Stagnation of the blood," is what some of the old-timers used to call it.

Be sure that you are feeding right. Give the sick birds a dessertspoonful of castor oil each night for three nights, and bathe the legs with some good liniment. While under treatment have the birds sleep on straw; do not allow them to roost. If your roosts are above two feet from the floor, lower them. High roosting places cause a deal of trouble.

How Much Food. A Limited Ration.

Mr. Editor:—How much mash would you feed to twenty-five Wyandotte and Leghorn pullets, and what proportion, using Russian turnips, bran, corn meal and B. B. B.? I can get stale bread for fifty cents a barrel, and have two quarts of milk to spare every day. Would you feed them stale bread and milk at noon, and wheat and cracked corn at night? Can you make up three feeds a day from the above for me? C. J.

Elberon, N. J.

We cannot set a fixed amount in pints or ounces of food to be fed the twenty-five pullets each day. The amount fed will have to vary with the appetites of the birds, and you will have to use your own judgment about it. Fowls are not machines in which we can put a stated amount of food and have it made into eggs. Feed what they will eat up clean and quickly, and no more.

We would make the mash about one-fourth corn meal, one-fourth stale bread, and one-half bran. If we used milk to mix it, we should not use the B. B. B. On days when milk was not used we would use the B. B. B., about one part in twelve parts of mash. We never fed Russian turnips to the exclusion of other bulky food, but if we had to, should make them about a fourth part of the whole mash, and have them well cooked. You could make three feedings by giving mash in the morning, bread and milk noon, and mixed grain one-third cracked corn, two-thirds wheat at night, or have a regular bill of fare as follows:

	Morning.	Noon.	Night.
Sunday,	Mash. Wheat.	Cracked corn.	
Monday,	Wheat. Bread and milk.	Wheat.	
Tuesday,	Mash. Wheat.	Cracked corn.	
Wednesday,	Mash. Wheat.	Wheat.	
Thursday,	Wheat. Bread and milk.	Cracked corn.	
Friday,	Mash. Wheat.	Wheat.	
Saturday,	Mash. Wheat.	Cracked corn.	

The turnips could also be fed raw as an adjunct to the noon feeding. Grain food given at noon we should feed in litter, and make them work for it. We know of similar rations that are giving good results; but we should prefer to have some cut clover in the mash rather than the turnips.

Scratching House in California.

Mr. Editor:—I have been a reader of your valuable paper for some time, and as I am going to try my luck at raising poultry wish a little information in regard to a poultry house. All the plans I have seen in your paper have been for houses in a cold climate, and as it never gets cold here I would like to get your idea of a house for this country. Are scratching sheds necessary where chickens can run out all the year round? I have twenty acres of land, and my chickens will have the run of the whole place. A. H. G.

San Jose, Calif.

As we understand your climate you have a rainy season, which practically corresponds to our winter, and in that rainy period the birds need shelter similar to their need of shelter with us in winter, probably not so much protection; for example, it might be as well to omit entirely the partition between the scratching shed and roosting pen, and if you had a large door in the back part of the scratching shed, to be left wholly open in the long period of bright sunny weather, the shed would then be a shady resort which would be much appreciated by the fowls, and the roosting rooms would be their bedroom and laying room.

You will get decidedly better results in egg yield if you do not give the birds free range, but keep the laying stock confined to yards. It has been conclusively demonstrated that fowls which do not range too widely lay the best, as they do not exhaust their energies in ranging.

The Hatch

EXPERIMENT STATION at Amherst, Mass., in reporting the results of its experiments with Bowker's Animal Meal as compared with green cut bone, says:

"The advantage in this trial is then clearly with the ANIMAL MEAL as a food for egg production. It has given more eggs of greater average weight, and at considerably less cost, and is a more convenient food to use, as well as safer."

BOWKER'S ANIMAL MEAL is a clean, wholesome combination of fresh, sweet meat and bone, thoroughly cooked, hence easily digested. It makes hens lay. It makes chicks grow. If you can't find it at your dealer's, and will pay the expressman, we will send you 5 lbs. for a quarter.

The Bowker Company,
43 Chatham Street, Boston, Mass.

WHITE WYANDOTTES.

300 fine pullets and 200 cockerels for sale. All early hatched, farm raised, and the pullets now beginning to lay.

PULLETS, \$2, \$2.50, and \$3 each.
COCKERELS \$3, \$4, and \$5 each.

A. F. HUNTER,
SO. NATICK, MASS.

\$2.75



SPECIAL \$2.75

Examination Free. Cut this ad. out and send to us: **SEND NO MONEY.** State your height and weight, number of inches around body at Bust and Neck, whether Black or Blue is wanted, and we will send you this cape by express C. O. D., subject to examination. You can examine and try it on at your nearest express office, and if found exactly as represented and the best value you ever saw or heard of, and far cheaper than any other house can offer, pay the express agent OUR SPECIAL PRICE, **\$2.75**, and express charges. **THIS CAPE** is the very latest style for Fall and Winter, made of Black or Blue all-wool genuine Clayton Beaver Cloth, 28 inches long, very full sweep, 12-inch upper cape and large storm collar, beautifully edged with fine Black Batte Seal Fur, trimmed with one row wide and two rows narrow Mohair braid. This garment is fine tailor-made throughout and equal to capes that sell at more than double our price. Write for our free Cloak Catalogue of everything in women's wear, and children's wear. Address, **SEARS, ROEBUCK & CO., CHICAGO.** (Sears, Roebuck & Co. are thoroughly reliable.—Editor.)

Fine Cockerels. SILVER WYANDOTTES,

from pen averaging 94 points. April hatched. Large, strong, vigorous, and extra well marked, fit to win at the fall shows, **\$3, \$4, and \$5 each.**

BUFF COCHINS,

from pens averaging 93½ points, sired by 12½ and 14 lb. males, large, heavily feathered legs, good even color, and fine breeders, **\$3, \$4, and \$5 each.**

SINGLE COMB BR. LEGHORNS

Sired by 94½ and 95 point males, with extra good combs, saddles and hackles, **\$1, \$2, and \$3 each.** Worth double the money. Money back if any bird is not satisfactory. A few fine pullets of above breeds at reasonable prices. For bargains in our other breeds, see ad. in Farm-Poultry for Sept. 1st, inside front cover; or send for prices on what you want.

POWOW POULTRY YARDS,
Amesbury, Mass.

SAVE ½ YOUR FUEL

By using our (stove pipe) **RADIATOR** With its 120 Cross Tubes,

ONE stove or furnace does the work of TWO. Drop postal for proofs from prominent men.

TO INTRODUCE OUR RADIATOR, where we have no active agent we will sell at wholesale price. Write at once.

ROCHESTER RADIATOR COMPANY,
90 Furnace St., ROCHESTER, N. Y.

**ANOTHER**

Fruit and Poultry Bargain.

22 acres land with poultry house 17 x 30, 1. 100 x 15, nearly new, painted and clapboarded. No house or barn, but same can be easily rented near by, as this is situated in small village 5 minutes to store, P. O., school and church, 3 miles to 3 stations. Land all set out to fruit and nut trees; 800 Apple trees.—150 Baldwins, 150 King, 100 Greening, 100 Gravensteins, 100 Ben Davis, 100 N. Spys, 50 Russets, 50 of other varieties; 250 Pears, 150 Peach, 240 Plum, 20 Cherry, 20 Grape, Quince, Gooseberries. 1000 Paragon Chestnut, 100 of other varieties; 12 Russian Mulberry, 12 Juneberry, 12 Buffalobery, Blk. Raspberries, Blackberries, quantities of Blueberries. Many of these trees will begin to bear this year. 25 tons of bone fertilizer used in setting. Owner will include 3 new incubators; brooders to match, all warranted; all for \$1600—\$1000 cash.

J. A. WILLEY, Exclusive Agent,
175 Devonshire St., Boston.

FINEST IN THE COUNTRY. WHITE AND BRONZE TURKEYS.

I have a lot of them for sale. These fowls have taken first premium at Madison Square Garden exhibition for five years in succession, and last fall won first at every show where they were exhibited. Also Ducks, Geese, Guineas, and other leading varieties of poultry. Warranted incubator eggs. Send for catalogue.

PINE TREE FARM,

D. A. MOUNT, Prop. Jamesburg, N. J.

FIRE - WEATHER - LIGHTNING PROOF

Black, painted or galvanized metal ROOFING and siding (brick, rock or corrugated).

METAL CEILINGS AND SIDE WALLS.

PENN METAL CEILING AND ROOFING CO., Ltd. Philadelphia.

Write for Catalogue.

THE NONE SUCH INCUBATORS and BROODERS

The World's Standard Machine.

Surpasses All Others.

"THE NONE SUCH" A self regulating and fully guaranteed incubator for only \$10. Equal to any high-priced machine on the market. Has improvements found in no other, and made by a reliable concern.

Absolutely the best incubator made. Send for cat. **FOREST INCUBATOR CO., Forest, Ohio.**

SPECIAL OFFER TO ADVERTISERS.

Here is a chance of a life time. We will insert your ad. in the Bantam and The Poultry, Pigeon and Pet Stock Fanciers' Directory of America for \$1 an inch, single column space, or any amount of advertising you wish to place with us at the Bantam rates. This includes an insertion of your ad. in the Directory. Send in your advertisements; don't delay. Combined circulation is 12,000 copies. Send for sample pages of the Bantam and The Directory. Send 6 cents and we will send you a copy of the Directory when published. **THE BANTAM, G. E. KUEHLE, Publisher,** 1735 Pearl Street, Cleveland, Ohio.

STANDARD BRED

White Leghorns,

Large, vigorous, extra layers. Winners at New York, 1895, 1896, 1897, and 1898, and at Boston, 1897 and 1898.

Stock and eggs for sale.

WHITING FARM,

Holyoke, Mass.

Buggies Down to \$16.50.

By cooperation the cost of building open buggies has been reduced to \$16.50; top buggies, \$22.75; top phaetons, \$37.50; top surreys, \$43.75, and all other vehicles at proportionately low prices.

All of our readers can get the benefit of these low prices by cutting this notice out and mailing to Sears, Roebuck & Co., Chicago, who will send them free by mail a complete catalogue of all kinds of buggies, carriages, wagons, harness, etc.

An Impossible Question.

Mr. Editor:—Will you kindly give me what you consider a well balanced ration? I mean the number of pounds of the different ground meals that would make, say, a barrel after being mixed. Also the number of pounds of said mixture sufficient for the morning meal for one hundred hens. I would also like to know the number of pounds of wheat required for the evening meal for one hundred hens.

Fruitvale, Calif. G. R. S.

We have said many times in these columns that it was absolutely impossible to tell how many pounds and ounces of food to give a flock of hens, or one hen, for just the same reason that the housewife cannot tell how many pounds and ounces of corned beef and cabbage or beefsteak and potatoes her family (or husband) will eat for dinner. The fowls' appetites are a factor; then, too, the different varieties of fowls have different eating capacity; then again, a flock of fowls will eat more at one time than at another. The only safe rule is to feed what the fowls will eat up clean and quickly, and they should be kept a little hungry.

If our friend will read the article, "Feeding Fowls for Eggs," on page 402, Nov. 15, 1897, FARM-POULTRY, he will get our idea of a good practical method of mixing grains and meals. That feeding method gives us good results, and would probably give him good results.

Standard Weight, and Paint.

Mr. Editor:—I received a Barred Plymouth Rock cock a day or two ago, and find he is a little light in weight, but his appearance is all right, and indicates that he is a good bird. Ought he to be up to standard weight?

Will you kindly let me know what kind of paint you use on Neponset roofing paper? W. R. O. Gloversville, N. Y.

No one of experience expects birds to be up to standard weight in mid-summer, just after the exhausting breeding season. Hens are usually a pound under standard weight at that time, and cocks one to two pounds. If he were at standard weight now we would mistrust be was too large and clumsy a bird for best results. The big coarse birds are generally poorer breeding males, and the females poorer layers than the somewhat smaller and finer birds. We personally would rather have birds a little under standard weight when in best condition.

The best paint is undoubtedly pure white lead and raw linseed oil. If you want paint of other color than white, the National Lead Company have colors which they supply for their lead paint, which will give you any desired shade. We have found that the best paint is the cheapest in the end.

Bumble Foot.

Mr. Editor:—Can you tell me the trouble with my hens' feet? Early in the spring one of them had her foot gather on the bottom. It seemed very painful; she lay on the ground, and could not eat. It was lanced, and bloody matter came from it. It filled and was lanced three times. I used a cracker poultice on it, and salve after it was lanced. It has healed now, but the feet look bad. She has not laid an egg since April.

I have two Leghorns that I think will have the same trouble. The first was a B. P. Rock, and was kept by herself until the foot healed.

I have a large B. P. Rock cock that is sick. He eats a little each meal, but stands by himself with head and tail drooped and eyes closed. Would moulting cause it?

I feed a morning mash made of bran two-thirds, meal one-third, and some beef scraps every other day. Twice a day I give them wheat, scalded oats, or a little cracked corn. They have a grass run an hour each night, and are all very fat. The house is comfortable and dry.

Please answer through FARM-POULTRY, which we like very much. H. J. T. Attleboro, Mass.

The trouble is bumble foot, or plantar abscess, caused by some injury to foot. Jumping from roosts that are too high is said to be an exciting cause. You should put a good warm linseed meal poultice on the foot as soon

as the trouble is discovered. When the swelling softens up lance at the point where the skin over abscess seems thinnest, and after lancing wash the wound out thoroughly with a solution of hydrogen dioxide one part, with two parts warm water. Use this solution to bathe the wound daily until healed. Do not be afraid to open the abscess freely when you lance it. Once lancing should be sufficient. After you have opened it keep it open by packing the wound with gauze smeared with unguentine. So treated it will heal from the bottom out, and will give a good foot when healed. The wound should be bathed and dressed every day, and better, twice a day. Keep bird by itself in clean coop on clean straw, with foot well bandaged until well. If your roosts are too high, lower them.

The cock's trouble is probably indigestion at moulting time, and he is probably lousy. Give him a little Sheridan's Condition Powder in his mash food, and also a little linseed meal.

As to Egg Records.

Mr. Editor:—Enclosed please find one dollar for payment for FARM-POULTRY another year. I am lonesome without it. I have built me a hen house 14 x 24, cut in two parts, and am keeping S. S. Hamburgs and B. Minorcas:—the two best laying breeds there are. Don't you think so?

Can you tell me what kind of fowls have laid the most eggs in the year? F. VANIL. Prattsburg, N. Y.

The S. S. Hamburgs and Black Minorcas are reputed to be among the very best of layers, but the Wyandottes and Rocks are pressing them hard for egg production; indeed we think White Plymouth Rocks hold the record, and White Wyandottes have made a record of two hundred and ten eggs each in a year.

Chicks in the Rain.

Mr. Editor:—Kindly tell me if you allow young chicks to run out when it rains? I find that confining them in a brooder kills more than a wetting does, they trample each other so trying to get out.

West Nyack, N. Y. W. F. W.

Yes, we always let our chicks out, rain or shine. A little rain doesn't hurt them, and we have shelter boards, as described in the article, "How We Hatch and Raise Chickens," March 15, 1897, FARM-POULTRY, which protect them from severe rain; that is, they have the shelter board and the brooder to take refuge in from the rain. If they get wet they are very certain to go into the brooder to dry off. It is a great mistake to keep chickens shut up after it has become daylight.

Bowel Trouble in Turkeys and Chicks.

Mr. Editor:—1st. Several of my turkeys, six months old, are troubled with looseness of the bowels, and hardly able to walk, staggering like drunken men. Their heads feel feverish. They have access to grit and shell, besides an all day run of a hundred acre pea field (peas not yet developed). They are lightly fed oats and cracked corn, mostly oats, once a day. No mash. Can you prescribe anything?

2d. Many of my pullets and cockerels, Brown Leghorns and Black Langshaus, have looseness of bowels. Evacuations are yellowish, otherwise they seem perfectly well. Fed once a day mash well cooked, composed of a third each of corn meal, ground oats, and ground wheat, with daily allowance of Bowker's animal meal in proportion of one to twelve. Plenty of grit and oyster shell, and free range. They are fed three times a day, morning mash, then wheat and oats, and some cracked corn thrown into scratching pen. More have lice, and more are overfed.

3d. My Brown Leghorn pullets five months and one week old, weigh three and five-eighths pounds, and cockerels of same breed five months old four pounds. Are they well grown? A. J. S. Mayesville, S. C.

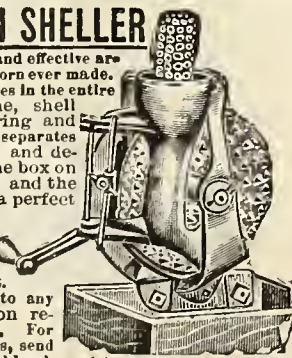
1st. Give two teaspoonfuls of castor oil at night for two nights. Also use about ten drops of tincture nux vomica to the quart of drinking water.

2d. Mash is too concentrated. Reduce the mash by making it one-half bran. Treatment same as for the turkeys.

3d. Yes.

95c FOR A \$2 CORN SHELLER

This is the most simple and effective arrangement for shelling corn ever made. There are only 6 pieces in the entire machine. Main frame, shell disc, shaft, tension, ring and crank. This sheller separates the corn from the cob, and deposits the corn in the box on which it is mounted and the cob outside. It has a perfect tension that can be adjusted instantly, will shell all sized ears, pop corn to the largest southern dent. Weighs 12 lbs. Sent to any address, by freight, on receipt of 95 cents. For all kinds of Corn Shellers, send for our Free Agricultural Implement Catalogue. SEARS, ROEBUCK & CO. (Inc.) Chicago, Ill. (Sears, Roebuck & Co. are thoroughly reliable.—Editor.)



Eureka Nest Box!

(PATENTED)

Increase fertility in eggs by culling out hens that lay infertile eggs.

SATISFACTION ABSOLUTELY GUARANTEED.

What Prof. Samuel Cushman Says:

(Formerly of Rhode Island Agricultural Experiment Station.)

"I certainly think your nest box is the most practical and feasible of anything I have seen."

CIRCULAR FOR TWO CENT STAMP.

Decrease grain bills by culling out hens that won't pay their way.

HARTNEST FARM, Framingham, Mass.

Address EXACTLY as above.

SHOWS
WHICH HEN
LAYS.

I Sell the Plans
and
Building Instruc-
tions for \$3.00.



THE VALUE OF GREEN FOOD

In the poultry house is fully appreciated by the poultry man, but he does not always know how to supply it in the cheapest and best form; particularly is this true in the dead of winter when every green thing is killed by frost. This is just where

PIONEER CLOVER MEAL

Comes to the relief of perplexed poultrymen. It is made from the choicest of clover hay, which is cut and preserved in a special way so as to retain its natural bright green color, delicious aroma, and essential oils and food properties. It is then ground into fine meal by our specially designed machinery, and carefully packed in sacks.

IN THE MIDDLE OF WINTER

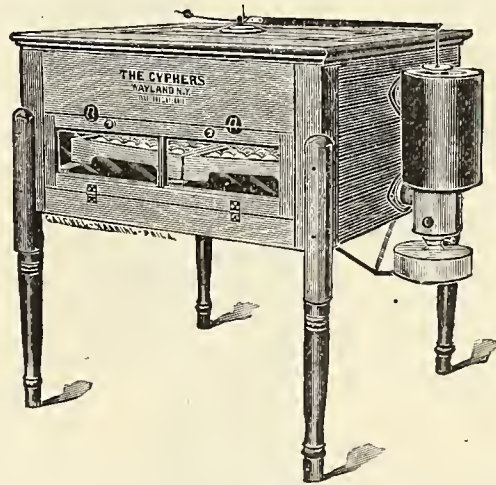
When eggs are worth 25c. per dozen or more, Pioneer Clover Meal makes hens lay double the eggs, because it supplies them with the best and cheapest of food rich in egg making material, i. e., Lime Salts for making the shell and Protein-albumin for making the white of the egg and the yolk. 'Tis green grass in the winter. Try it this winter, and double the returns from your hens. No matter where you live, we can reach you cheaply. Send for free sample and book of editorial endorsement. Price 50 lbs. \$1; 160 lbs. \$2; 5 lbs. 25c.; all in sacks.

THE BENNETT & MILLETT CO., Box F. P., Gouverneur, N. Y.

We have made special efforts to obtain the very lowest freight classification for Pioneer Clover Meal, hence you can get it delivered for but little above purchase price. Rates on 100 lbs. to most New England points, 21c.; New York City, 20c.; Omaha, 58c.; San Francisco, \$1.70; other rates given on application.

THE CYPHERS

The Only Incubator Requiring
No Artificial Moisture.



We Pay the Freight.



FAST FREIGHT LINE

Though the Cyphers is a recognized leader the world over, many improvements have been made on it this year, and today it stands for all that brains and science can produce along this line.

The Cyphers Brooder

Built on entirely new principles is the machine you want. Catalogues free.

CYPHERS INCUBATOR CO.

Box 4, WAYLAND, N. Y.

Food and Grit.

Mr. Editor:—I am much interested in what I find in your paper, finding information in nearly all of its pages that is of use to me. I am keeping about twenty-five S. C. Brown Leghorns, with a few common hens to be used chiefly as sitters, the Leghorns not in my experience doing this duty well; I had about forty in all, but have killed off some of the older hens, and am going to depend for my egg supply during the coming winter on some thirty pullets which are now in very good condition, I think. They have had the run of about four acres during the whole summer, and have been fed some corn, but more wheat screenings of rather a high quality, with a mash of bran and ground corn every morning. Judging by the deprecations in my garden, they have supplied themselves with plenty of green food thence. They have a yard about forty yards long and twenty-five yards wide, but I seldom confine them there except for a part of the day; if let out for all day, they get under the porch and make something of a mess round the house generally, as it is impossible to keep always after them. The pullets, however, roam far and wide, because I have not clipped their wings, and they fly over the fence of my yard.

I would like to join the Experiment Club, and will do my best to help along the cause, but I am going to ask you two or three questions. I have had about two thousand eggs (I did not keep a record) the last six months, from my forty laying hens, and I raised in all about sixty chicks, losing, I am afraid, forty or so additional in the March hatchings. I made a number of mistakes then, and we had quite a lot of wet cold weather, which was very hard on the chickens. Judging by your articles, I think I have not been giving animal food enough, and would probably have got more eggs had I been more liberal in this respect. I have just completed a house according to your scratching house plan, but found it needed a little more lumber than your specifications named; I have two scratching houses and two pens. Please advise me as exactly as you can on the following points:

1st. Give me as exactly as possible a daily menu for fifty birds, all more or less full grown, naming what brands of food in the way of animal food, what in the way of green food, and, if possible, give the quantities as measured by an ordinary stable bucket. When you say "pints," "quarts," and so on, the only way I can get to that is by buying those measures. I am a busy man, in town all day, and service is not always intelligent, unless the instructions are very explicit.

2d. Do you think it necessary for me to supply grit in addition to what the chickens find in the way of ashes, coal dust, and sand round the place? If so, what kind of grit should I buy, and where?

If my questions are too exacting or troublesome, put it down to my ignorance. If you send me the Experiment Club blanks, will endeavor to fill them out properly from first October.

Baltimore, Md.

[We have repeatedly stated that it is impossible to give an exact menu, the exact quantity, for fifty or for any number of birds, for precisely the same reason that the housewife cannot tell "to a bean" how much dinner the family will eat. The only rule with fowls is to feed what they will eat up clean and quickly.]

The brands (or kinds) of food which we use are clearly described in the article, "Feeding Fowls for Eggs," Nov. 15th, '97, F.-P.

Yes, we would always supply grit to the fowls, under all conditions of range.—Ed.]

The poultry business has been gaining so very rapidly in the estimation and appreciation of the public in the past few years that we always feel like pointing out anything of special advantage to that industry. In another column of this issue will be found the ad. of the Harvey Seed Co., of Buffalo, N. Y., who are dealers in all kinds of poultry supplies. It will be noticed from the ad. that they are sending out a complete illustrated and descriptive catalogue free of charge. It would be well to secure a copy of this book before laying in your winter's supplies for the poultry yard. Please say that you saw the ad. in our paper.

A Barred Plymouth Rock Specialist.

We found in Mr. Wm. B. Davis, one of the most capable Barred Plymouth Rock breeders in New England. If a list of half a dozen of the best flocks of Barred Plymouth Rocks in New England were made, Mr. Davis' birds would be included in that list. He is a specialist, believing in one variety and in the best breeds breedable or buyable. Nothing short of this will suit him. Therein lies the pleasure for Mr. Davis, and herein will be found the profit also, so far as the standard bred branch of the poultry business is concerned.

It is not often that you strike so clean and uniformly good a flock of Barred Plymouth Rocks as the sixty or seventy old birds owned by Mr. Davis, and the four hundred to four hundred and fifty large sized young birds we saw on his place the afternoon of July 25. He has an ideal place for raising poultry, consisting of some eighteen acres of meadow, orchard and woodland. He is head bookkeeper in the Merrimack National Bank, a position that is confining, and his Barred Plymouth Rocks furnish him exercise exactly to his liking. Birds bred and exhibited by him at Amesbury, Mass., and at the New England fair held at Portland, Me., have scored to as high as 94 points, a number including both cockerels and pullets, going to 93 and 93½ points by such judges as H. B. May, A. C. Hawkins and I. K. Felch. At Amesbury, last winter, with Mr. Felch as judge, he won as follows: First (94) and second (93) cockerels; second pullet (93½) (same score as first prize); second hen (93); third cock; first and second pens; grand sweepstakes for best cock, two cockerels, two hens and five pullets; silver cup trophy for finest display, and eight specials, in competition with 143 birds in the class. Each year Mr. Davis' breeding stock is mated with great care, every chick is marked, and a careful record is kept so that he can note the comparative value of the different matings. Mr. Davis sells birds on approval, guarantees the safe arrival of eggs, also a good hatch, and can be depended on to take good care of every customer.

NOTE: The above was taken from the R. P. J. account of Mr. Davis' Barred P. Rocks, written by editor Curtis on his trip east in July. Mr. Davis is reliable in every way, and all readers of FARM-POULTRY interested in Blue Barred Plymouth Rocks, had better look up his ad. in this issue.

If you are going to need a fine breeding cockerel in Silver Wyandottes, Buff Cochins or Single Comb Brown Leghorns, you will be interested in new adv. of Powow Poultry Yards in this issue.

More Liberal Than Ever.

Send postal to E. J. Graves, secretary, Amesbury, Mass., for copy of new premium list of fifth annual show of the Amesbury Poultry Association, Nov. 30, Dec. 1—2, 1898. I. K. Felch, H. B. May, judges.

How to Prevent Hog Cholera.



Hog Cholera is caused by indigestion, and can be prevented by feeding cooked feed. We advise our readers to write the EMPIRE MFG. CO., 674 Hampshire Street, Quincy, Ill., for catalogue of FEED COOKERS. These Cookers save at least one-third the feed, put stock in healthy condition, save your hogs, and will more than pay for themselves in one week's use.

CATARRH CAN BE CURED.

Catarrh is a kindred ailment of consumption, long considered incurable; and yet there is one remedy that will positively cure catarrh in any of its stages. For many years this remedy was used by the late Dr. Stevens, a widely noted authority on all diseases of the throat and lungs. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all sufferers from Catarrh, Asthma, Consumption, and nervous diseases, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing, with stamp, naming this paper, W. A. Noyes, 920 Powers Block, Rochester, N. Y.

CUT RATES.

For 30 days. Breeders, yearlings or young stock S. C. W. Leghorns, Light Brahmas, Mammoth Pekin Ducks, Belgian Hares, \$1 each. White Indian Games, Holland Turkeys, Embden Geese, \$2 each. Prairie State sectional brooder complete \$20. Order now and get the benefit of this offer. Circular.

W. R. CURTISS & CO., PROP., Ransomville, N. Y.

SEND US ONE DOLLAR

and cut this ad. out and send to us and we will send you this, Our Highest Grade Minnesota Sewing Machine by freight, C. O. D., subject to examination. Examine it at your nearest freight depot and if found perfectly satisfactory, equal to any machine in the market, and

....The Greatest Bargain You Ever Saw or Heard of....

pay the freight agent Our Special Price, less the \$1.00 sent with your order.

Our Special Offer Price

.....\$18.55.....

for 3 drawer machine.

\$19.55 for 5 drawer

and \$20.55 for 7 drawer.

Our Free Sewing Machine Catalogue,

MINNESOTA AT \$18.55 to \$20.55 is the greatest value ever

offered, the lowest prices ever named on the best machine

possible. THE MINNESOTA has every modern improve-

ment, every good point of

every high grade machine made, with the defects of none.

Made by the best maker in America. Solid oak cabinet, bent cover,

latest 1899 skeleton frame, piano polish, finest nickel drawer pulls,

rests on 4 casters, ball bearing adjustable treadle, genuine Smyth

iron stand, finest large high arm head made, positive four motion

feed, self threading vibrating shuttle, automatic bobbin winder, ad-

justable bearings, patent tension liberator, improved loose wheel,

adjustable presser foot, improved shuttle carrier, patent needle

bar, patent dress guard. GUARANTEED the lightest running, most durable

and nearest noiseless machine made. Every known attachment is furnished and our

Free Instruction Book tells just how anyone can run it and do either

plain or any kind of fancy work. A 20 YEAR GUARANTEE is sent

with every machine. The machine weighs 120 pounds; 70 cents will pay the freight 500 miles; \$1.25 a 1000 miles

SEND US \$1.00 with your order.

We will save you \$25.00. Address,

While we sell various makes and grades of Sewing Machines at \$8.50, \$10.00, \$11.00, \$12.00, \$13.00, \$14.00 and \$15.00, all of which are fully described in

THIS, OUR HIGHEST GRADE

MINNESOTA AT \$18.55 to \$20.55 is the greatest value ever

offered, the lowest prices ever named on the best machine

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Free Instruction Book tells just how anyone can run it and do either

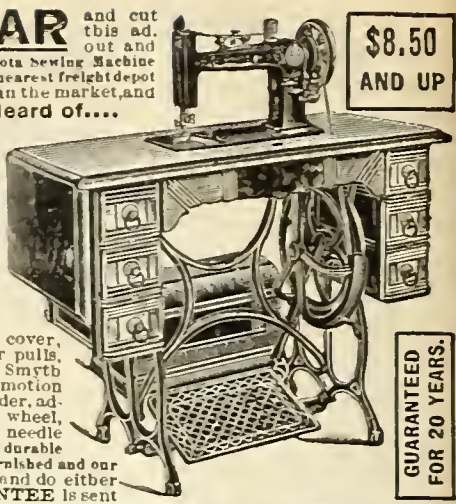
plain or any kind of fancy work. A 20 YEAR GUARANTEE is sent

with every machine. The machine weighs 120 pounds; 70 cents will pay the freight 500 miles; \$1.25 a 1000 miles

SEND US \$1.00 with your order.

We will save you \$25.00. Address,

SEARS, ROEBUCK & CO. (Inc.), CHICAGO, ILL.



\$8.50
AND UP

GUARANTEED
FOR 20 YEARS.

PEEP-O'-DAY INCUBATORS AND BROODERS.

Poultry Specialties.



There is no brooder on the market that is so extensively used as the PEEP-O'-DAY. Twenty used by the editor of this paper. Used in large numbers by the State Experiment Stations. Brooder parts, stoves, castings, thermometers, etc. Poultry for chickens, ducks, or fowl. Portable Coops. Our goods are the most practicable, and have stood the test for several years. Illustrated catalogue free.

E. F. HODGSON, Dover, Mass.

FRED G. ORR & CO., 5 Commercial Wharf, Boston, Mass., carry a full line of our goods.



EVANS VEGETABLE AND ROOT CUTTERS

Hens consume large quantities of grass and other green food when they can get it. They can't get it in the winter when every green thing is frozen up. Our Vegetable and Root Cutter supplies these deficiencies. It cuts all kinds of roots and vegetables—beets, carrots, turnips, cabbage, potatoes, etc., into fine pieces like angle worms. All fowls, big and little, eat them easily and greedily and thrive upon them. They double the egg crop and make hens lay in the middle of winter when eggs are worth the most money. Feeding roots thus prepared saves 50% of the grain feed. They turn easy, cut fast and last indefinitely. One will pay for itself quickly in the increase of eggs it will produce. Made in four sizes. Price, \$1. and up. Leading poultrymen and editors endorse it. Circulars free.

EVANS MANUFACTURING CO. Dept. J, Ypsilanti, Mich.

THE NEW American Standard - - FREE - -

To every subscriber to FARM-POULTRY who sends us at once \$3 cash to renew, or extend their own subscription one year, together with two new subscribers to FARM-POULTRY, we will send one copy of the Standard free.

Remember. Three subscriptions to FARM-POULTRY one year

at \$1 each \$3.00

The New Standard of Perfection 1.00

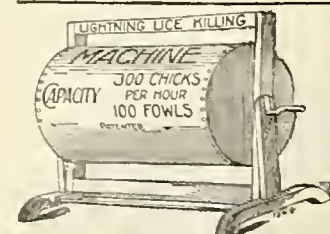
all for \$3 if sent at once.

The New American Standard of Perfection has been revised by the American Poultry Association, edited by Mr. J. H. Drevenstedt, and is up-to-date. It is now ready for sale, price \$1. We will send a copy postpaid for that amount to any address in the United States. One subscription to F.-P. and the Standard \$1.75. Send all orders to us direct.

I. S. JOHNSON & CO., 22 Custom House St., Boston, Mass.

RABBITS

THE ONLY LOW-COST BOOK ON THE RABBIT ever published to our knowledge, is "The Rabbit: How to select, Breed and Manage the Rabbit for Pleasure or Profit," by W. N. Richardson, Secretary of the American Belgian Hare Club, and a man of long experience with Rabbits. Second edition now ready, nicely illustrated, enlarged and much improved. Price 25 cts. or with AMERICAN POULTRY ASSOCIATION one year 40 cts. CLARENCE C. DEPUY, Publisher, 514-520 East Onondaga St., Syracuse, N. Y.



COMMIT LICE MURDER

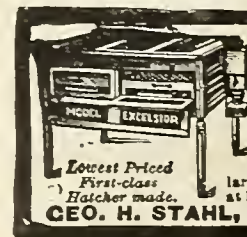
if you wish to secure the best results from your poultry. You cannot expect hens to be happy and contented, and to lay eggs when they are covered with lice.

THE BEST WAY TO GET EGGS

is to kill all body lice, head lice, fleas, bugs, gnats and mites that are sucking the hens' blood. It takes both blood and comfort to produce eggs.

THE LIGHTNING LICE KILLING MACHINE

kills them all instantly. No tedious handling of fowls. Price No. 1 machine \$2.50; No. 2, \$3; No. 3, \$4; Half lb. of lice powder with each machine. Lightning Poultry Bits—prevent all feather pulling, \$1.00 per doz. Stamp for circular. CHAS. SCHILD CO. Box 14, Ionia, Mich.

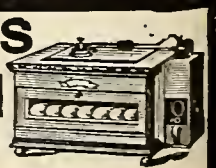


HATCH CHICKENS EXCELSIOR INCUBATOR.

Simple, Perfect, Self-regulating. Thousands in successful operation. Guaranteed to hatch a larger percentage of fertile eggs, at less cost, than any other Hatcher.

WOODEN HEN

Most efficient small incubator ever invented. Perfect in every detail. Just the thing for poultry raising on a small scale, 25 egg capacity. Catalogue free.



GEO. H. STAHL, Patentee and Sole Manufacturers, 114 to 122 S. Sixth St., QUINCY, ILL.

House Plans.

Mr. Editor:—I received your reply to my letter asking for advice in regard to poultry house, etc., some days ago. In your letter, and also in the August 15th number of F.-P., (which contains your letter), you advise me that I ought not to keep more than three hundred hens in a hen house 220 x 15 ft., or twenty-five hens in a pen 18 x 15 ft. In the plan for scratching shed house which you give in June 15th number, you say each combined shed and pen is 18 x 10 ft., and will well house twenty-five fowls; that gives each fowl 7 1-5 square ft. of floor space.

As I had planned, my pens would be 18 x 15 ft., and put fifty fowls in a pen. This would give each fowl 5 2-5 square feet of floor space, which is a difference of 1 4-5 square ft. per fowl, and I thought that a flock of fifty could be in that space all right, as a large flock given the same amount of floor space each, it seems to me, have more freedom, and are not so crowded as a smaller flock in a proportionally smaller pen, and, if I remember right, I read something to that effect some time ago.

I have changed my plans somewhat since I heard from you, and have decided to sell two hundred of the latest pullets, keep the old hens in the barn where they were last winter, and build a hen house 125 x 16 ft., 8 ft. high front and 6 ft. high back; this hen house to house three hundred fowls, or about that number. If I put three hundred pullets in, each bird will have 6 2-3 square ft. of floor space. This is but little less than you advise in the plan for scratching shed house in June 15th number. Is it too small? Which is right, the comments on my letter in the August 15th number of F.-P., or the plan given in June 15th number? L. H. LEB.

Union, N. Y.

[Three hundred birds in a house that size should do well, but we believe fewer in number would do better. Whether they would do sufficiently better to make it commercially profitable, we do not know; but many things enter into a calculation, especially the care for cleanliness of house, etc. If you take great pains to keep the house spick spanny clean, and free from foul odors, the three hundred should do well there.]

The great disadvantage of a house sixteen feet wide is that you don't get the sunlight into the back part of it. The ten feet wide house in June 15th number is planned for sunlight, and sunlight is an important aid to health.—ED.]

The Indianapolis Show.

Owing to the fact that many breeders wish to exhibit at both Chicago and Indianapolis, we have concluded to change the date so as to benefit the greater number. We have selected the week of Jan. 23d to 28th, '99, and have retained same judges. Kindly allow this space in your esteemed journal; also change date in your list of exhibits, and oblige, Yours, THOS. W. POTTAGE, Indianapolis, Ind. Sec'y.

The Grit Business Is Good.

Col. White, of the Mica Crystal Grit Co., writes us:—"It is early yet for grit orders, but our sales and shipments for Sept., 1898, exceed those of Sept., 1897, by 103 tons."

This is a most gratifying showing, and indicates the great gain in better poultry methods. Mica Crystal Grit is a splendid grit, is always sharp for grinding the food in the gizzard, and contains both iron and magnesia.

The Cass County Poultry, Pigeon and Pet Stock Association, of Dowagiac, Mich., will hold their first exhibition in their city, Nov. 29th, 30th, Dec. 1st and 2d, 1898. The officers of this association are hustlers, and are doing everything that lays in their power to make their exhibition a grand success, and one of the best ever held in southern Michigan.

The association has secured the services of Chas. McClave to do the judging at their show. Competition open to the world, and the show room will be disinfected with "Sanitas."

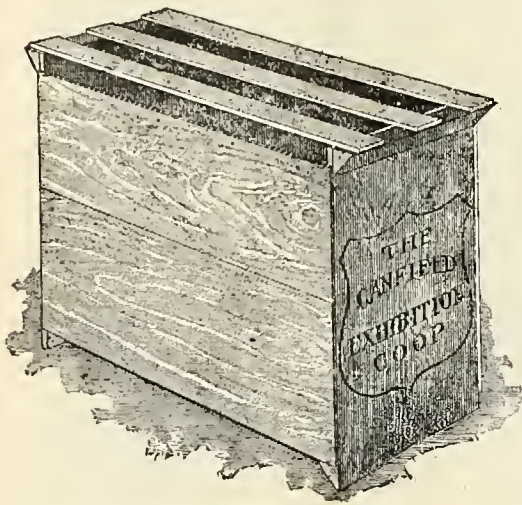
They have a very neat and attractive premium list, which will be mailed to any one interested in poultry for the asking, by addressing a postal to E. E. Alliger, Sec'y, Dowagiac, Mich.

About My White Leghorns.

The above is the title of a neat little booklet, from the Ridgewood Poultry Yards, Danbury, Conn., Geo. L. Geibel, prop'r, in which is set forth the merits of the White Leghorns advertised in this paper by Mr. Geibel.

Mr. G.'s standard is "large white layers," and he aims to combine utility qualities with show room qualities, and if birds bought of him are not perfectly satisfactory they may be returned, and the purchase price will be refunded.

We announce to our readers that the Illinois Incubators and Brooders are to be represented in our columns again this season. The advertisement of these machines makes its first appearance for the new season's trade with this issue. For the benefit of those who may not remember the facts, we will state that this is the ironed covered fire proof incubator, manufactured by Mr. J. H. Jones, of Streator, Ill. It would be well to write Mr. Jones for his free illustrated book, "Illinois," before buying an incubator or brooder. Kindly say to him you saw his ad. in our paper.



The Canfield Shipping Coop.

We published an article on shipping coops on page 330, October 1st number, in which we spoke of the coops made by Mr. C. H. Canfield, of Batb, N. Y., but the illustration which had been ordered sent, failed to reach us in time for that number. We give the illustration herewith, and it well illustrates the excellent Canfield shipping coop, although the electrotyping has blunderingly stamped it an "Exhibition Coop."

These shipping coops are made in a dozen different sizes for different sizes of shipment, and can be nailed together in a minute or two. They will be found a great convenience by busy poultrymen.

PAINT TALKS—IX.

A Practical Demonstration.

In the preceding papers of this series I have given various reasons for preferring the better class of combination paints. I now propose that the property owner shall put this teaching to a practical proof which is within the reach of anyone who has a house to be painted this fall.

I propose that he shall paint one-half of each side of the house with pure white lead and oil, (being careful to purchase lead bearing the brand of an aetna corrodor), and the other half with some good combination paint. I am particular about the brand of lead, because a combination paint might easily be purchased by mistake, and the test would then be between two combination paints, and would prove nothing as to the qualities of lead. Let him note first, the actual cost of painting equally well each of the two halves; then let him observe the comparative appearance of each; and, as time passes let him watch the deterioration of each.

Within a year or two the superiority of the combination paint will be demonstrated; and if the experimenter, when repainting becomes necessary, would repaint only the portion requiring it with the original material, adding the cost to the original item, under its proper head, he could eventually settle this question so effectively in his own neighborhood that there would be no longer room for any argument about it. It would not be proper for me to advertise here any of the many combination paints suitable for this test; but if anyone desiring to make the experiment will address me in care of this paper, I will furnish a list of approved makes, obtainable in his neighborhood.

To make this experiment fair, each exposure of the house should be divided (roughly) into two halves, of which one should be painted with pure white lead, the other with the combination paint. Every exposure will thus have an equal chance, which is necessary to a fair test, as the southern exposure is much more severe on paints than the other exposures. The brands should also be removed from the packages, and private marks substituted, so that the painter may not be tempted to treat the two kinds of paint differently. It might also be instructive to inquire which paint the painter regards, from its appearance and working qualities, as the better.

Here is a practical suggestion, which, if carried out by a sufficient number of property owners throughout the country, will settle the paint question definitely, and will eventually save a great deal of money and annoyance to the paint consuming public.

I have asserted that a properly prepared combination paint containing a large proportion of zinc white, is cheaper, covers more surface, holds its color longer and is more durable than any other form of house paint, and if paint authorities know anything about the subject, the paint user will save himself money and trouble by following my suggestion.

STANTON DUDLEY.

OVERWORKED WOMEN.

Letters to Mrs. Pinkham From Women Who Have Been Helped From Sickness to Health.

The ordinary every-day life of most of our women is a ceaseless treadmill of work. How much harder the daily tasks become when some derangement of the female organs makes every movement painful and keeps the nervous system unstrung!

The following letter from Mrs. WALTER S. BANTA, Sparkill, N. Y., tells the story of many women, and shows them how to get relief:

"DEAR MRS. PINKHAM:—I cannot thank you enough for all Lydia E. Pinkham's Vegetable Compound has done for me. When I wrote to you I had suffered for years with falling, inflammation and ulceration of the womb; my back ached, and I was so much distressed I could scarcely walk. I was a burden to myself and did not care whether I lived or died."

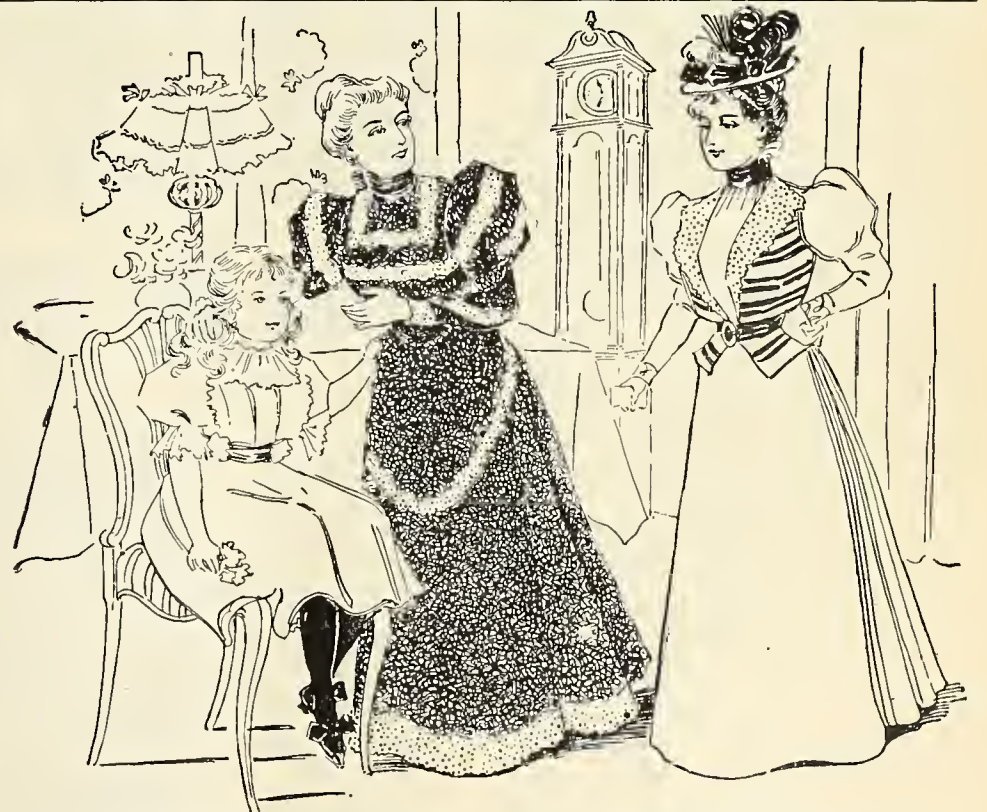
"I have taken five bottles of your medicine and it has done wonders for me as all my friends can testify. I can now do my own work, and do not know how to express my gratitude to you for the good your medicine and advice have done me. I owe my life to Mrs. Pinkham."

Mrs. Pinkham's counsel is offered free to all women who need advice about their health. Her address is Lynn, Mass. Mrs. P. H. HUTCHCROFT, Kellerton, Iowa, tells here in her own words how Mrs. Pinkham helped her:

"DEAR MRS. PINKHAM:—I was in a very bad condition before I wrote to you and began the use of Lydia E. Pinkham's Vegetable Compound. I did not know what to do. I suffered terribly every month, when on my feet would have such a bearing-down feeling, was very weak, womb was swollen, back ached, appetite was very poor, also had trouble with my head. I have taken several bottles of your Compound and cannot say enough in its favor. It helped more than all the doctors."

Lydia E. Pinkham's Vegetable Compound; a Woman's Remedy for Woman's Ills

S. C. WH. LEGHORNS, S. C. BR. LEGHORNS.
WH. WYANDOTTES, RING NECK PHEASANTS.
Our stock is a combination of beauty and utility, large size, prolific layers, metallic stripes and snowy white. Can furnish first class exhibition and breeding stock in cocks, cockerels, hens and pullets. Our specialty is low prices. CRYSTAL HILL FARM, CYPHERS & FISHER, Washington, (Warren Co.), N. J.



A little girl of nine years, living in Wagar, Washington Co., Ala., had been sick from the time of her birth with some ailment which no one seemed able to diagnose correctly. The physicians who were consulted differed in their opinions as to the nature of the complaint. Some said it was catarrh, while others were sure it was not catarrh. The mother of the child had about given up hope of ever seeing the little one well again, but one day her cousin advised a trial of Ripans Tabules. After taking the Tabules three days, the child improved rapidly, and could eat any food that was given her. In two weeks' time she was well, and could run about with just as much vigor, and play just as hard, as the neighbors' children. As her mother stated to a lady acquaintance: "She had been sick all her life until she took Ripans Tabules, and they cured her."

A new style packet containing TEN RIPANS TABULES in a paper carton (without glass) is now for sale at some drug stores — FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (120 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York — or a single carton (TEN TABULES) will be sent for five cents.

Fowl Hits.

Twelve hundred dollars was the price paid for the egg of a great auk at a recent sale in London of the effects of a Mrs. Wise. That's something like it. Were it not for the fact that the great auk is now extinct enterprising American poultrymen would be tempted to try a cross of the bird upon some of their hens that are broken down behind.—*Poultry World*.

"Bold Chanticleer."

All ages and peoples have a word of praise for "Bold Chanticleer." Prof. James Russell Lowell, in a small volume entitled, "The Vision of Sir Launfal," published some years ago, and to which we would call the attention of all true lovers of nature, discourses after the following sweet fashion on the beauty of the early summer time, and at the close pays his tribute to the bird.

Now is the high-tide of the year,
And whatever of life hath ebbed away
Comes flooding back, with a rippling cheer,
Into every bare inlet and creek and bay;
Now the heart is so full that a drop overfills it.
We are happy now because God so wills it:
No matter how barren the past may have been,
'Tis enough for us now that the leaves are green.
We sit in the warm shade and feel right well
How the sap comes up and the blossoms swell.
We may shut our eyes, but we cannot help knowing
That skies are clear and grass is growing;
The breeze comes whispering in our ear
That dandelions are blossoming near,
That maize has sprouted, that streams are flowing,
That the river is bluer than the sky,
That the robin is plastering his house near by:
And if the breeze kept the good news back
For other couriers we should not lack:
We would guess it all by yon heifer's lowing,
And hark! how clear bold chanticleer,
Warmed with the new wine of the year,
Tells all in his lusty crowing!

—Exchange.

Dad's Ducks.

"Dad" Wheeler is a character of note about town. He is an old time southern negro, polite and obliging to all whom he considers belong to the "fust families," scornful to all who, in his opinion, are outside of this, in these democratic days, mysterious number. Dad gained his notoriety by an ability, perhaps not peculiar to himself, to tell stories in which truth is most noticeable by its absence. Meeting Dad one morning, he hailed me with, "Mawuin', sar." Knowing his prolixity, I attempted to pass him with simply a greeting in return; but it would not do; he stopped me. Throwing his head on one side, shutting his right eye, and looking hard at me with his left, he said: "Mr. —, doz you 'member, sar, dat pow'ful hard rain we had las' Mondy en Chusdy a week?" I replied that I did. "Well, sar," said Dad, "somthin' mity queery like happen ober to my house 'long o' dat rain."

"Indeed, Dad, what was it?" I replied.

"Well, sar, you knows dat Honey creek runs rite frue my backyard; well, sar, on dat Chusdy night, jes' a'ter supper, I was a-settin' by the kitchen fiar a-waruin' myse'f eu study-in', when de ole ooman speaks up en sez, sez she, 'Wheeler, you betteh go en move dat bar'l what de ole duck ez settin' in out of dat shed; rainin' so hard en long, fusting you know de watah come up en float dat bar'l eleau 'way.' I hearn de ole ooman, but 'pears like I didn't pay much 'tention to her, eaze I sot dara-studin' twell 'bout nine 'clock, en den I tink 'bout what de ole ooman say, en I gets up to go out en move dat bar'l. Well, sar, you perhaps 'members dat my kitchen do' stan's up 'bout two or tree feet from de yard, en de berry fustus step I takes outen dat do' I goes into watah clean up to dar" (placing his hands just below his waist). "But, sar, I didn't min' dat, en I wades out to dat shed, en looks in dat ar bar'l. Well, sar, sure ez you stan'in' dar, dat duck was a-settin' dar in dat ar bar'l, wiv nothin' 'ceptin' her head astiekin' outen de watah. I makes a grab a'ter her, but she took en div under. I makes 'nother grab a'ter, but she den div under agin; den somethin' sez to me, 'Wheeler, let her sot,' en I jes up en goes right back into de kitchen. Well, sar, sure ez you is born, dat duck bin a-settin' dar on dem eggs in dat water eber since; en dis mornin', sar, when I goes outen to look at her, dar she wah a-swimmin' roun' in dat bar'l wiv nine little ducks a-swimmin' a'ter her, ebry one ob dem eggs hatchin' out; en if you doubts, sar, what I's tellin' you, jes come down to my house, en I done show you de ducks."—*Harper's Monthly Magazine*.

MANN'S GREEN BONE CUTTERS

Make 100 Per Cent. in the Poultry Business.

They prepare *Green Cut Bone* in the best possible form at the least possible cost. *Green Cut Bone* doubles the egg product. It imparts constitutional vigor to the hen and she can lay more and better flavored eggs. It makes hens lay in winter when eggs bring the most money. It makes chicks grow rapidly and makes the high priced, early market broilers. It develops the condition of the whole flock.

Mann's Clover Cutter is made to meet the demands for a strong, fast, durable and easy running machine that will cut all kinds of hay and clover, dry or green. Has but one knife to keep in order. Safe—no danger to hands or fingers. One revolution of the wheel makes 12 cuts. They will last indefinitely. Price, \$8. and \$10. Made with and without stand.

Mann's Swinging Feed Tray is an indestructible feed trough that keeps the feed in and the dirt out. Hens can't scratch in it or roost on it.

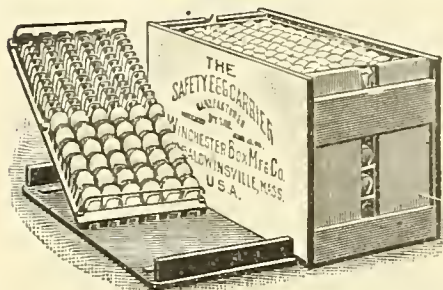
Mann's Granite Crystal Grit contains Iron, Silica, Aluminum and Mica. It is the hardest, cleanest grit known. No sand or dirt. Grinds all kinds of foods perfectly. It is both a digester and tonic. Cash or on installments. Illustrated catalogue FREE.

F. W. MANN CO., Box 55, Milford, Mass.



JOSEPH BRECK & SONS ARE OUR BOSTON JOBBERS.

The SAFETY EGG CARRIER.



NO MORE BROKEN EGGS,
NO MORE PASTEBOARD FILLERS,
NO MORE MUSTY EGGS.

If You Use the Safety Egg Carrier.

The only perfect Carrier for the transportation of eggs. There is just enough spring on the trays to prevent the least breakage. The case is also open on the ends, which prevents the eggs from becoming musty. No dealer in fancy eggs can afford to use any other, as eggs sell readily at one and two cents per dozen more by being shown up in neat and attractive carriers. Trays are easily removed, and can be turned bottom up without spilling an egg.

IT IS CLAIMED by thousands who are now using them, to be THE ONLY PERFECT EGG CARRIER.

SEE WHAT THEY SAY.

New York, Dec. 4, 1895.

The Safety Egg Carrier Co.,
Gentlemen:—Without reference to your numerous testimonials my own experience during the past two years proves to me that the Safety Egg Carrier is the best thing for its purpose in existence. I therefore beg to enclose herewith my order for twenty more. The eggs from my farm are principally shipped to families in New York city, from whom I constantly receive the highest praise as to perfect condition of eggs on arrival.
Faithfully yours,
WM. C. CASEY.

The cases are made in sizes as follows: 6 doz., 9, 12, 16 and 30 dozen.
Send for descriptive circular and price list. Formerly manufactured by Safety Egg Carrier Co., Harvard, Mass. NOW made solely and exclusively by

WINCHESTER BOX MFG. CO., - BALDWINVILLE, MASS.

AT SOME FUTURE TIME

there may be discovered better means of hatching and brooding chickens. For the present however there is nothing quite equal to the

Old....
"Reliable"
Machines

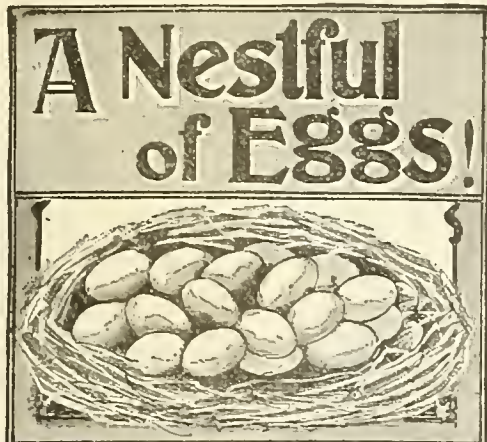
Every condition necessary to complete and entire success has been observed and the result is known to poultry men ALL OVER THE WORLD. More told about them, and our mammoth Poultry Farms in our 234 page catalogue. Sent by mail on receipt of 10 cents.

RELIABLE INCUBATOR AND BROODER CO., Quincy, Ill.



You Do and You Don't! WANT

You do want every day, a nestful of eggs from September to April, when they will command the highest prices per dozen in the large markets and are in great demand.



You don't want your hens to lay much from May to Sept. when eggs sell for only about what it costs to raise them. Your hens better rest until fall or winter.

Getting eggs when you want them is a matter of choice. You can have them or not. It depends wholly upon the care, feeding and management. **Four essentials** are absolutely necessary to succeed, as follows:—
1st. Hatch your chickens in the months of March, April and May.
2nd. Keep them growing so the pullets will mature early and lay by Oct.
3rd. Help your hens over the molting season, so that all will lay early.
4th. Follow the example of successful Poultry-raisers, who by the use of

Sheridan's Condition Powder

in the mash food, as directed, are doing all of the above, and increasing their profits yearly. It is a powerful food digestive. Therefore no matter what foods you use in the mash, mix with it daily, Sheridan's Powder; it assures perfect assimilation of the food elements needed to form new plumage; to make pullets mature early; to make hens lay when you want eggs.

Sold by Druggists, Grocers and Feed Dealers, or sent by mail. Large cans most economical to buy. **IF YOU CAN'T GET IT NEAR HOME, SEND TO US. ASK FIRST.** We send one pack, 25 cts; five, \$1.00. A two-pound can, \$1.20; Six, \$5.00. Express paid. Sample copy "best Poultry paper" sent free. **L. S. JOHNSON & CO., 22 Custom House St., Boston, Mass.**

BUFF COCHINS.

I have paid the most of my attention to my Buff Cochins this season, and as a result have a fine lot of chicks growing up to meet the demands of the fall trade. Shall be able to furnish anything in the Buff Cochins line this fall, and will do my best to please you. A few of my breeders for sale at low prices. I need the room.

— ALSO —

some nice
BUFF LEGHORNS (Arnold),
BUFF P. ROCK (Roberts),
and
BARRED P. ROCK
cockerels to spare. I send out no eulls at any price.
C. B. CROWELL, Brattleboro, Vt.



"We wish to testify to the good qualities of the
NEW
Successful Incubator.
"We were hatched by it, and know whereof we speak."
"We didn't die in the shell for lack of moisture, because this machine generates its own moisture." Other new features fully explained in catalogue. Sent for 6 cents in stamps.
DES MOINES INCUBATOR CO.
Box 14, DES MOINES, IA.

BARGAINS IN BREEDING STOCK.

The Riverview Poultry Yards, T. H. Campbell, Prop., Laurel St., Ellsworth, Maine, will sell for the next 30 days the following breeding stock: Barred White, and Buff Plymouth Rocks; Golden White, and Silver Wyandottes; Brown, White, and Buff Leghorns; Silver Spangled Hamburgs; Light Brahmas; White Wonders, White Sherwoods, Black Minorcas; and chicks of the above different breeds will be sold cheap. The above stock are as fine as can be found. Anyone wishing to buy should correspond with me. Eggs reduced to 75 cts. per sitting.
T. H. CAMPBELL, Box 221, Ellsworth, Me.

FREE!

Four Plants of the New Red Cross Currant.

We desire to introduce Green's Fruit Grower into 50,000 new homes. To do this quick, we offer to send it six months on trial for 20c. and mail each subscriber 4 strong plants of Red Cross Currant FREE. Green's Fruit Grower is published monthly at 50c. per year, and ranks high among the horticultural journals. Red Cross is a new currant, best in quality, largest in size and most productive, is sold by reputable nurseries at 75c. per 12. Send only 20c. to GREEN'S FRUIT GROWER, Rochester, N.Y.



We Have Purchased

of A. S. Whitney, Gouverneur, N. Y., all his right, title and interest in the famous \$5 Prize Brooder. On larger facilities for manufacture, and the advantage of our location (on the main line of the New York Central R. R.) will give our customers the benefit of from two to four days in getting their brooders, besides a large saving on account of the smaller rates of freight. It is needless to say that the \$5 Prize Brooder stands without an equal as a complete brooder house, either summer or winter. Send for free catalogue.
JORDAN MILLING CO., Jordan, N. Y.



THE MODEL MILL.

A Hand Mill for grinding Grain, Dry Bones, Shells, etc., for Feeding Chickens, etc.
3 Sizes, Wt. 20, 34 and 62 lbs.
The most Rapid Grinding, the most durable and the Cheapest Mill Made.
If your dealer don't keep it, address **The C. S. Bell Co., Hillsboro, Ohio, U. S. A.**

740 Silk Fringe Cards, Love, Transparent, Escort & Acquaintance Cards, LAUGHING CAMERA, Prize Puzzles, New Games, Magical Illusions, &c. Finest Sample Book of 25 Cards. Biggest list of Visiting and Hidden Name Cards. Premiums All for 2c. stamp. **OHIO CARD CO., Cadiz, Ohio.**